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Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **ES3-3319\_Mar17**

## CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3319**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v6  
Calibration procedure for dosimetric E-field probes**

Calibration date: **March 14, 2017**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature  $(22 \pm 3)^\circ\text{C}$  and humidity  $< 70\%$ .

Calibration Equipment used (M&TE critical for calibration)

BNY  
03-27-2017

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 06-Apr-16 (No. 217-02288/02289)   | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103244       | 06-Apr-16 (No. 217-02288)         | Apr-17                 |
| Power sensor NRP-Z91       | SN: 103245       | 06-Apr-16 (No. 217-02289)         | Apr-17                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 05-Apr-16 (No. 217-02293)         | Apr-17                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-16) | In house check: Jun-18 |
| Network Analyzer HP 8753E  | SN: US37390585   | 18-Oct-01 (in house check Oct-16) | In house check: Oct-17 |

|                |                              |                                          |                        |
|----------------|------------------------------|------------------------------------------|------------------------|
| Calibrated by: | Name<br><b>Jeton Kasrati</b> | Function<br><b>Laboratory Technician</b> | Signature<br>          |
| Approved by:   | Name<br><b>Katja Pokovic</b> | Function<br><b>Technical Manager</b>     | Signature<br>          |
|                |                              |                                          | Issued: March 16, 2017 |

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## Glossary:

|                          |                                                                                                                                                         |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| TSL                      | tissue simulating liquid                                                                                                                                |
| NORM <sub>x,y,z</sub>    | sensitivity in free space                                                                                                                               |
| ConvF                    | sensitivity in TSL / NORM <sub>x,y,z</sub>                                                                                                              |
| DCP                      | diode compression point                                                                                                                                 |
| CF                       | crest factor (1/duty_cycle) of the RF signal                                                                                                            |
| A, B, C, D               | modulation dependent linearization parameters                                                                                                           |
| Polarization $\varphi$   | $\varphi$ rotation around probe axis                                                                                                                    |
| Polarization $\vartheta$ | $\vartheta$ rotation around an axis that is in the plane normal to probe axis (at measurement center),<br>i.e., $\vartheta = 0$ is normal to probe axis |
| Connector Angle          | information used in DASY system to align probe sensor X to the robot coordinate system                                                                  |

## Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

## Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\vartheta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub>** = NORM<sub>x,y,z</sub> \* frequency\_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).

# Probe ES3DV3

## SN:3319

Manufactured: January 10, 2012  
Calibrated: March 14, 2017

Calibrated for DASY/EASY Systems  
(Note: non-compatible with DASY2 system!)

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3319

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 1.07     | 1.07     | 1.12     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 102.5    | 101.2    | 103.5    |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                          | 1.0 | 0.00    | 199.3    | $\pm 3.5 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 195.9    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 195.7    |                           |

Note: For details on UID parameters see Appendix.

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$\text{V}^{-1}$ | T1<br>$\text{ms}\cdot\text{V}^{-2}$ | T2<br>$\text{ms}\cdot\text{V}^{-1}$ | T3<br>ms | T4<br>$\text{V}^{-2}$ | T5<br>$\text{V}^{-1}$ | T6    |
|---|----------|----------|-----------------------------|-------------------------------------|-------------------------------------|----------|-----------------------|-----------------------|-------|
| X | 70.81    | 508.1    | 35.61                       | 29.87                               | 3.768                               | 5.1      | 0.566                 | 0.571                 | 1.012 |
| Y | 67.78    | 484.5    | 35.24                       | 29.79                               | 3.269                               | 5.1      | 1.181                 | 0.458                 | 1.009 |
| Z | 70.95    | 506.9    | 35.21                       | 30.32                               | 4.051                               | 5.1      | 1.117                 | 0.534                 | 1.012 |

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the  $E^2$ -field uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3319

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 6.76    | 6.76    | 6.76    | 0.52               | 1.48                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 6.46    | 6.46    | 6.46    | 0.59               | 1.35                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 5.38    | 5.38    | 5.38    | 0.57               | 1.39                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 5.20    | 5.20    | 5.20    | 0.80               | 1.13                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 4.86    | 4.86    | 4.86    | 0.48               | 1.60                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 4.60    | 4.60    | 4.60    | 0.76               | 1.23                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 4.41    | 4.41    | 4.41    | 0.80               | 1.27                    | ± 12.0 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3319

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 6.37    | 6.37    | 6.37    | 0.80               | 1.19                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 6.29    | 6.29    | 6.29    | 0.80               | 1.17                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 5.07    | 5.07    | 5.07    | 0.57               | 1.50                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 4.88    | 4.88    | 4.88    | 0.80               | 1.24                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 4.62    | 4.62    | 4.62    | 0.80               | 1.21                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 4.42    | 4.42    | 4.42    | 0.80               | 1.25                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 4.18    | 4.18    | 4.18    | 0.80               | 1.25                    | ± 12.0 %  |

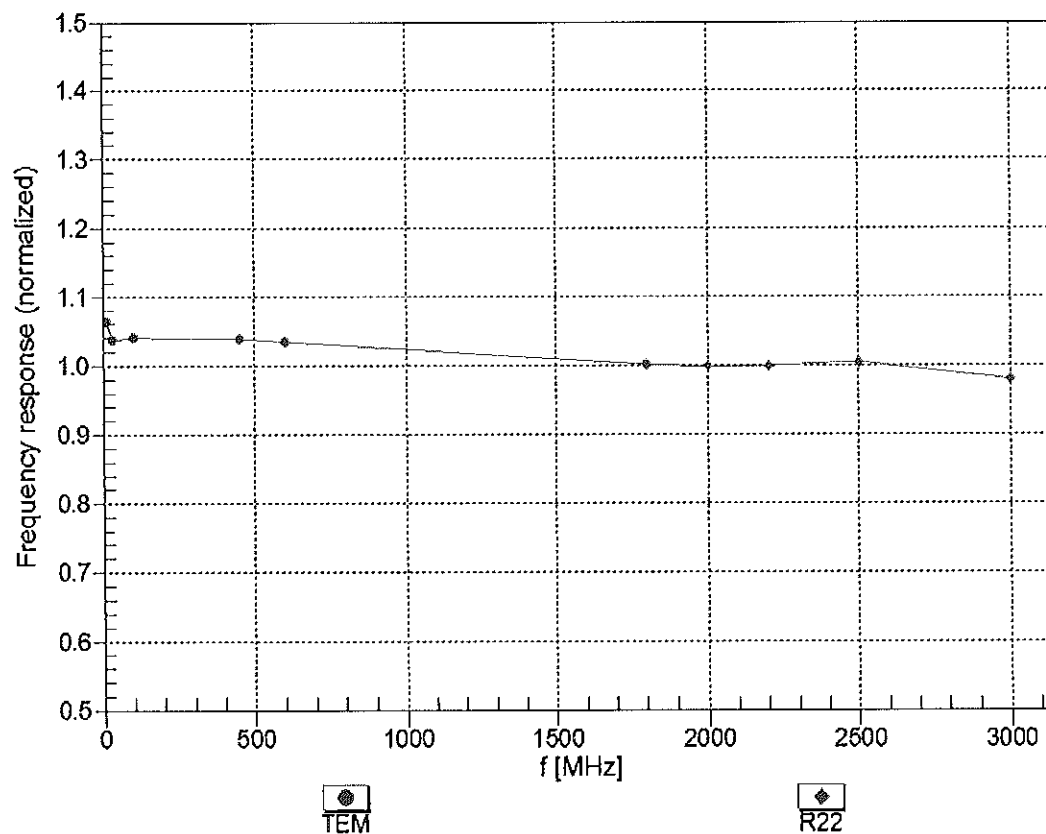
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

## Frequency Response of E-Field

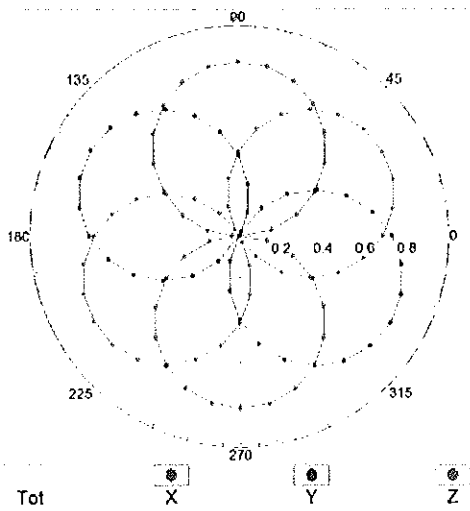
(TEM-Cell:ifi110 EXX, Waveguide: R22)



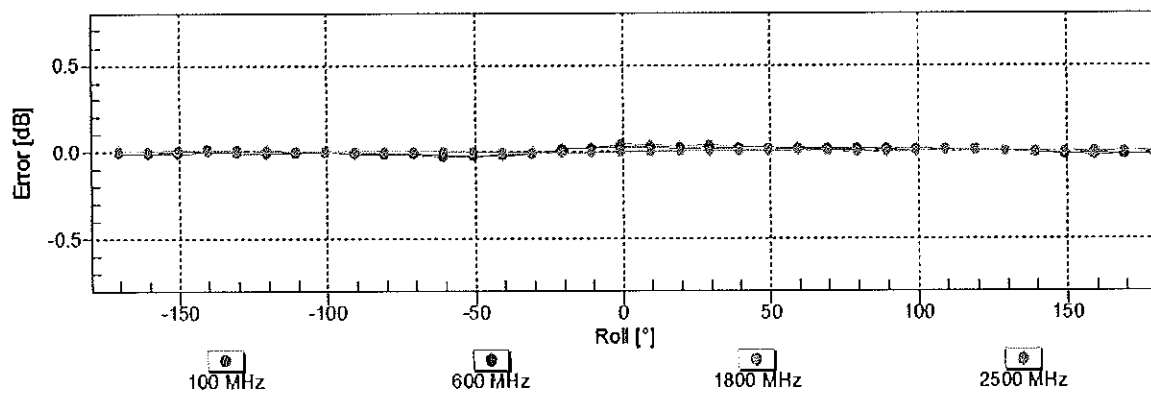
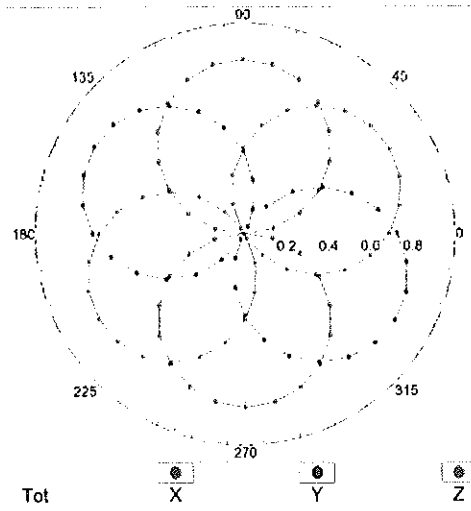
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  (k=2)

## Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$

f=600 MHz, TEM



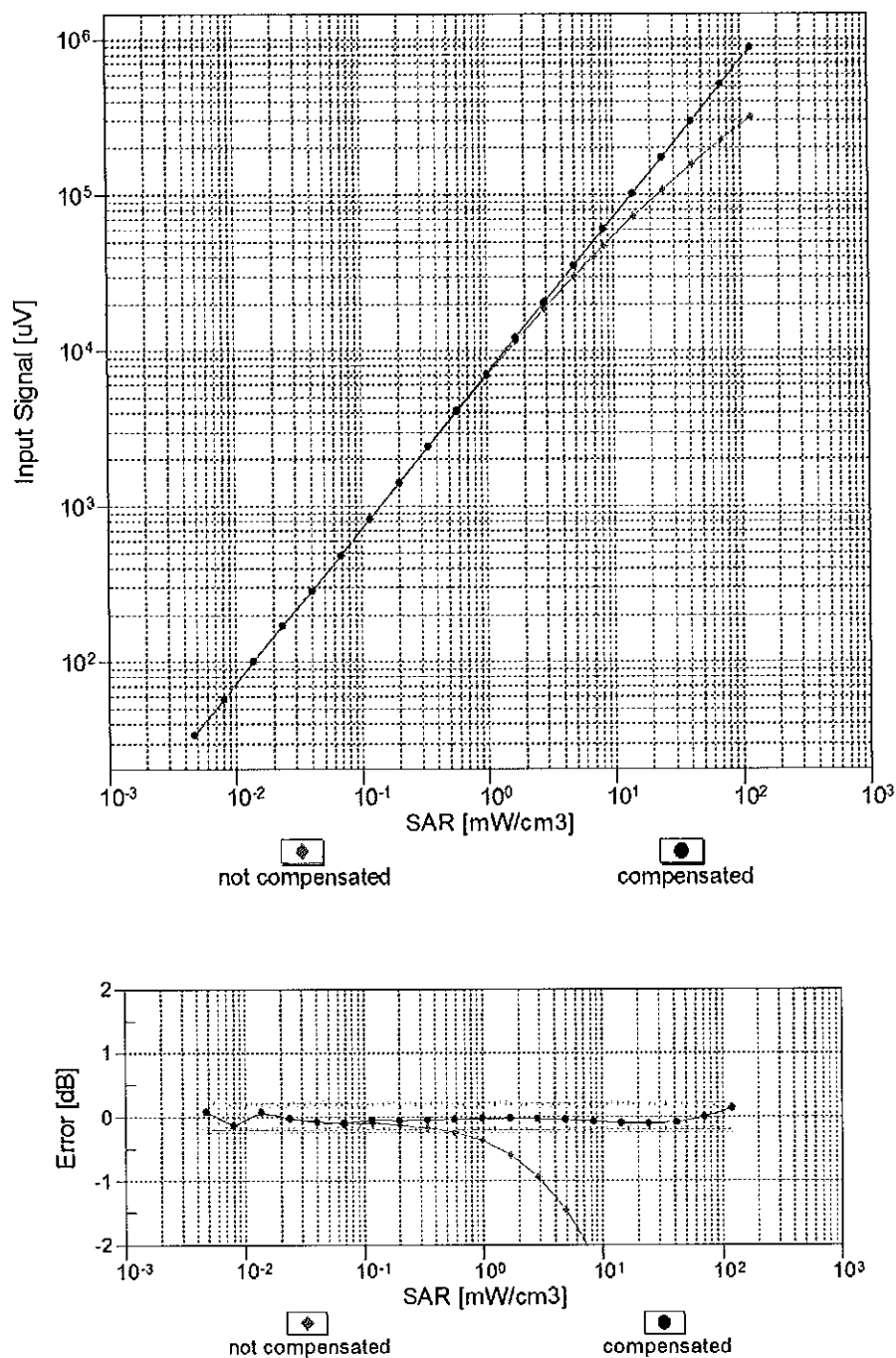
f=1800 MHz, R22



Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

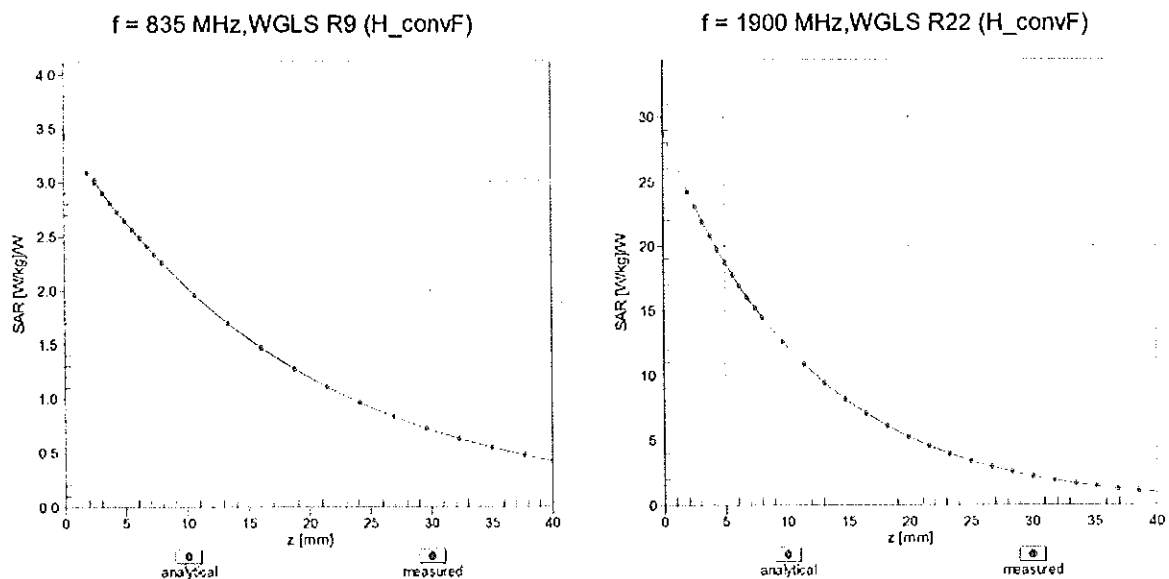
## Dynamic Range f(SAR<sub>head</sub>)

(TEM cell , f<sub>eval</sub>= 1900 MHz)



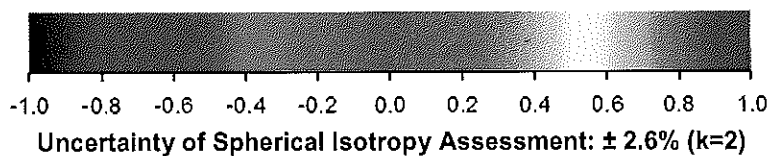
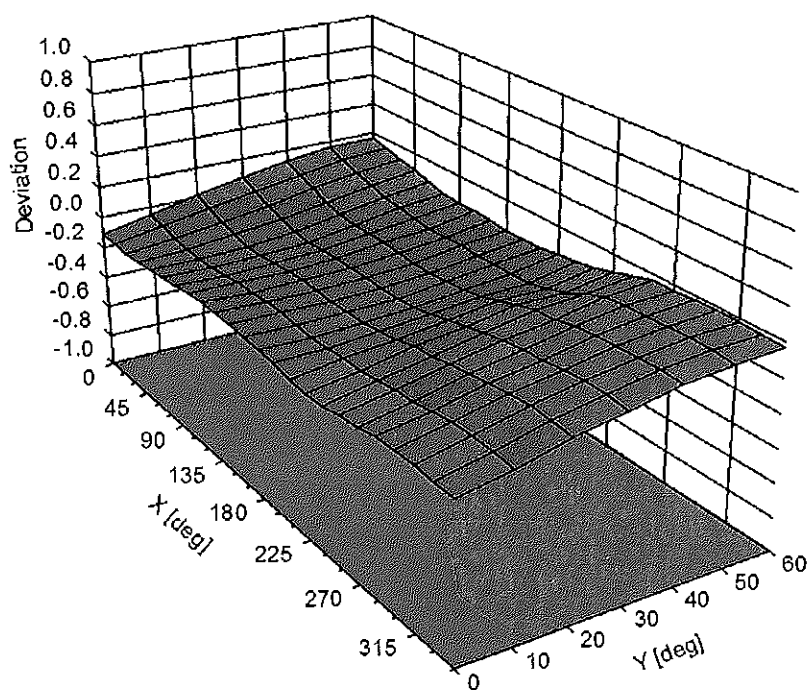
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  (k=2)

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

Error ( $\phi, \theta$ ),  $f = 900 \text{ MHz}$



## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3319

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 59.3       |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 10 mm      |
| Tip Diameter                                  | 4 mm       |
| Probe Tip to Sensor X Calibration Point       | 2 mm       |
| Probe Tip to Sensor Y Calibration Point       | 2 mm       |
| Probe Tip to Sensor Z Calibration Point       | 2 mm       |
| Recommended Measurement Distance from Surface | 3 mm       |

**Appendix: Modulation Calibration Parameters**

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\sqrt{\mu V}$ | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|------------------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00                   | 1.00  | 0.00    | 199.3    | $\pm 3.5 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 195.9    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 195.7    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 9.85    | 81.84                  | 20.91 | 10.00   | 25.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 10.35   | 82.84                  | 20.96 |         | 25.0     |                                  |
|               |                                               | Z | 9.24    | 80.45                  | 20.49 |         | 25.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.42    | 72.72                  | 18.48 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.15    | 68.46                  | 16.03 |         | 150.0    |                                  |
|               |                                               | Z | 1.19    | 69.33                  | 16.47 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.41    | 66.60                  | 17.14 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.35    | 65.41                  | 16.14 |         | 150.0    |                                  |
|               |                                               | Z | 1.37    | 65.70                  | 16.31 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 5.30    | 67.44                  | 17.71 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.25    | 67.26                  | 17.48 |         | 150.0    |                                  |
|               |                                               | Z | 5.29    | 67.34                  | 17.54 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 15.55   | 91.05                  | 25.81 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 21.52   | 97.05                  | 27.50 |         | 50.0     |                                  |
|               |                                               | Z | 13.40   | 88.00                  | 24.84 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 14.67   | 89.87                  | 25.47 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 19.36   | 95.07                  | 26.93 |         | 50.0     |                                  |
|               |                                               | Z | 12.87   | 87.11                  | 24.58 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 72.67   | 116.69                 | 31.50 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 120.97                 | 32.15 |         | 60.0     |                                  |
|               |                                               | Z | 31.96   | 103.34                 | 28.02 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 17.81   | 101.87                 | 38.70 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 13.13   | 92.90                  | 34.83 |         | 50.0     |                                  |
|               |                                               | Z | 14.72   | 95.03                  | 35.71 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 18.31   | 99.96                  | 34.53 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 16.31   | 97.17                  | 33.33 |         | 60.0     |                                  |
|               |                                               | Z | 16.55   | 96.65                  | 33.14 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 120.78                 | 31.24 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 119.86                 | 30.63 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 120.27                 | 31.10 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 121.31                 | 30.58 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 120.10                 | 29.87 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 120.31                 | 30.21 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 13.74   | 94.06                  | 31.43 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 12.10   | 91.11                  | 30.13 |         | 80.0     |                                  |
|               |                                               | Z | 12.69   | 91.48                  | 30.26 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 120.44                 | 31.46 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 119.51                 | 30.84 |         | 70.0     |                                  |
|               |                                               | Z | 86.39   | 117.92                 | 30.89 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 124.75                 | 30.39 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 122.04                 | 29.08 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 122.19                 | 29.33 |         | 100.0    |                                  |

|           |                                                     |   |        |        |          |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|----------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 132.42 | 32.41    | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 127.37 | 30.18    |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 127.22 | 30.26    |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 16.06  | 95.52  | 27.18    | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 16.39  | 95.85  | 27.05    |       | 70.0  |         |
|           |                                                     | Z | 12.53  | 90.50  | 25.41    |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 10.70  | 94.04  | 25.42    | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 7.71   | 88.38  | 23.29    |       | 100.0 |         |
|           |                                                     | Z | 7.05   | 86.60  | 22.76    |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 6.38   | 88.03  | 23.33    | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.42   | 81.78  | 20.80    |       | 100.0 |         |
|           |                                                     | Z | 4.44   | 81.54  | 20.78    |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 18.54  | 98.19  | 28.07    | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 19.46  | 98.99  | 28.08    |       | 70.0  |         |
|           |                                                     | Z | 13.96  | 92.52  | 26.13    |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 10.52  | 93.81  | 25.31    | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 7.46   | 87.90  | 23.09    |       | 100.0 |         |
|           |                                                     | Z | 6.91   | 86.34  | 22.63    |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 6.72   | 89.10  | 23.77    | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.58   | 82.55  | 21.16    |       | 100.0 |         |
|           |                                                     | Z | 4.59   | 82.28  | 21.12    |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 2.88   | 78.08  | 19.66    | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.19   | 73.41  | 17.38    |       | 150.0 |         |
|           |                                                     | Z | 2.24   | 73.69  | 17.58    |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 29.89  | 101.32 | 27.42    | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 57.75  | 111.39 | 29.82    |       | 50.0  |         |
|           |                                                     | Z | 20.04  | 94.63  | 25.49    |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.01   | 60.00  | 29147.00 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.01   | 96.41  | 0.53     |       | 150.0 |         |
|           |                                                     | Z | 0.00   | 108.36 | 0.61     |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 10.82  | 81.42  | 24.20    | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 12.01  | 84.16  | 25.00    |       | 25.0  |         |
|           |                                                     | Z | 10.45  | 80.25  | 23.85    |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 12.11  | 85.56  | 24.37    | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 14.10  | 88.79  | 25.27    |       | 40.0  |         |
|           |                                                     | Z | 11.33  | 83.90  | 23.85    |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 12.14  | 85.93  | 24.81    | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 12.75  | 87.19  | 25.07    |       | 50.0  |         |
|           |                                                     | Z | 11.32  | 84.12  | 24.10    |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 10.68  | 89.49  | 29.10    | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 9.42   | 86.65  | 27.81    |       | 100.0 |         |
|           |                                                     | Z | 10.05  | 87.45  | 28.09    |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.65   | 69.30  | 18.41    | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.54   | 67.66  | 17.23    |       | 110.0 |         |
|           |                                                     | Z | 1.58   | 68.07  | 17.43    |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00 | 134.53 | 35.47    | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 132.25 | 34.36    |       | 110.0 |         |
|           |                                                     | Z | 100.00 | 131.68 | 34.21    |       | 110.0 |         |

|           |                                                |   |       |        |       |      |       |         |
|-----------|------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 15.72 | 103.92 | 29.80 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 9.78  | 95.24  | 26.89 |      | 110.0 |         |
|           |                                                | Z | 9.50  | 94.05  | 26.46 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 5.02  | 67.22  | 17.01 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.97  | 67.04  | 16.79 |      | 100.0 |         |
|           |                                                | Z | 5.00  | 67.08  | 16.82 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 5.07  | 67.40  | 17.16 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.02  | 67.21  | 16.94 |      | 100.0 |         |
|           |                                                | Z | 5.04  | 67.26  | 16.97 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.43  | 67.77  | 17.43 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.38  | 67.58  | 17.21 |      | 100.0 |         |
|           |                                                | Z | 5.41  | 67.64  | 17.25 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 5.34  | 67.82  | 17.61 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.28  | 67.62  | 17.38 |      | 100.0 |         |
|           |                                                | Z | 5.32  | 67.69  | 17.43 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 5.40  | 67.98  | 17.85 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.34  | 67.76  | 17.61 |      | 100.0 |         |
|           |                                                | Z | 5.39  | 67.85  | 17.67 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.73  | 68.10  | 18.30 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.66  | 67.87  | 18.05 |      | 100.0 |         |
|           |                                                | Z | 5.72  | 68.01  | 18.13 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.90  | 68.56  | 18.70 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.82  | 68.29  | 18.44 |      | 100.0 |         |
|           |                                                | Z | 5.90  | 68.48  | 18.54 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.97  | 68.43  | 18.86 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.89  | 68.17  | 18.59 |      | 100.0 |         |
|           |                                                | Z | 5.97  | 68.35  | 18.70 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.46  | 67.71  | 18.10 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.40  | 67.50  | 17.87 |      | 100.0 |         |
|           |                                                | Z | 5.45  | 67.61  | 17.94 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 5.55  | 68.34  | 18.45 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.48  | 68.10  | 18.20 |      | 100.0 |         |
|           |                                                | Z | 5.55  | 68.24  | 18.28 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.71  | 68.73  | 18.89 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.63  | 68.45  | 18.63 |      | 100.0 |         |
|           |                                                | Z | 5.71  | 68.65  | 18.73 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 5.76  | 68.86  | 19.19 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.67  | 68.55  | 18.90 |      | 100.0 |         |
|           |                                                | Z | 5.77  | 68.80  | 19.03 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.97  | 69.51  | 19.77 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.85  | 69.11  | 19.43 |      | 90.0  |         |
|           |                                                | Z | 5.99  | 69.45  | 19.61 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.96  | 69.27  | 19.86 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.85  | 68.87  | 19.52 |      | 90.0  |         |
|           |                                                | Z | 5.99  | 69.24  | 19.72 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 6.00  | 69.37  | 19.97 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.89  | 68.96  | 19.62 |      | 90.0  |         |
|           |                                                | Z | 6.03  | 69.34  | 19.83 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 1.41   | 72.76  | 17.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.06   | 67.92  | 14.61 |      | 150.0 |         |
|           |                                                     | Z | 1.11   | 68.62  | 15.03 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 2.74   | 66.09  | 10.68 | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 2.51   | 65.26  | 10.02 |      | 80.0  |         |
|           |                                                     | Z | 2.76   | 65.88  | 10.66 |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 68.83  | 115.90 | 31.34 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 121.06 | 32.22 |      | 60.0  |         |
|           |                                                     | Z | 31.05  | 102.92 | 27.93 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 2.05   | 69.35  | 17.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.92   | 67.86  | 16.10 |      | 150.0 |         |
|           |                                                     | Z | 1.93   | 68.06  | 16.23 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 2.02   | 69.37  | 17.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.88   | 67.83  | 16.06 |      | 150.0 |         |
|           |                                                     | Z | 1.90   | 68.05  | 16.21 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 18.22  | 99.79  | 34.47 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 16.25  | 97.06  | 33.29 |      | 60.0  |         |
|           |                                                     | Z | 16.47  | 96.50  | 33.09 |      | 60.0  |         |
| 10100-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.71   | 72.76  | 17.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.41   | 71.21  | 17.05 |      | 150.0 |         |
|           |                                                     | Z | 3.48   | 71.52  | 17.17 |      | 150.0 |         |
| 10101-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.57   | 68.80  | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.46   | 68.11  | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 3.49   | 68.27  | 16.30 |      | 150.0 |         |
| 10102-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.66   | 68.61  | 16.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.56   | 68.02  | 16.30 |      | 150.0 |         |
|           |                                                     | Z | 3.58   | 68.13  | 16.36 |      | 150.0 |         |
| 10103-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 8.88   | 78.01  | 21.33 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.67   | 77.74  | 21.13 |      | 65.0  |         |
|           |                                                     | Z | 8.55   | 77.02  | 20.81 |      | 65.0  |         |
| 10104-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 8.93   | 77.00  | 21.79 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.73   | 76.65  | 21.51 |      | 65.0  |         |
|           |                                                     | Z | 8.82   | 76.47  | 21.44 |      | 65.0  |         |
| 10105-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 7.98   | 74.72  | 21.06 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.03   | 74.96  | 21.06 |      | 65.0  |         |
|           |                                                     | Z | 7.61   | 73.51  | 20.40 |      | 65.0  |         |
| 10108-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 3.27   | 71.88  | 17.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.02   | 70.38  | 16.87 |      | 150.0 |         |
|           |                                                     | Z | 3.08   | 70.66  | 16.99 |      | 150.0 |         |
| 10109-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 3.25   | 68.64  | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.13   | 67.91  | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 3.16   | 68.05  | 16.25 |      | 150.0 |         |
| 10110-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.71   | 70.99  | 17.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.49   | 69.37  | 16.56 |      | 150.0 |         |
|           |                                                     | Z | 2.54   | 69.69  | 16.72 |      | 150.0 |         |
| 10111-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.94   | 69.24  | 17.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.83   | 68.45  | 16.51 |      | 150.0 |         |
|           |                                                     | Z | 2.85   | 68.47  | 16.54 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.35 | 68.45 | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.25 | 67.82 | 16.20 |      | 150.0 |         |
|           |                                                | Z | 3.28 | 67.92 | 16.26 |      | 150.0 |         |
| 10113-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 3.09 | 69.18 | 17.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.99 | 68.50 | 16.60 |      | 150.0 |         |
|           |                                                | Z | 3.00 | 68.49 | 16.61 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.36 | 67.61 | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.31 | 67.41 | 16.53 |      | 150.0 |         |
|           |                                                | Z | 5.33 | 67.45 | 16.56 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.78 | 68.00 | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.71 | 67.76 | 16.71 |      | 150.0 |         |
|           |                                                | Z | 5.74 | 67.85 | 16.76 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.50 | 67.87 | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.45 | 67.67 | 16.59 |      | 150.0 |         |
|           |                                                | Z | 5.46 | 67.70 | 16.60 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.37 | 67.63 | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.32 | 67.44 | 16.57 |      | 150.0 |         |
|           |                                                | Z | 5.33 | 67.46 | 16.59 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.80 | 67.97 | 16.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.75 | 67.80 | 16.74 |      | 150.0 |         |
|           |                                                | Z | 5.76 | 67.82 | 16.75 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.47 | 67.83 | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.42 | 67.63 | 16.58 |      | 150.0 |         |
|           |                                                | Z | 5.43 | 67.65 | 16.60 |      | 150.0 |         |
| 10140-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.71 | 68.61 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.61 | 68.02 | 16.22 |      | 150.0 |         |
|           |                                                | Z | 3.64 | 68.14 | 16.28 |      | 150.0 |         |
| 10141-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.82 | 68.57 | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.73 | 68.05 | 16.36 |      | 150.0 |         |
|           |                                                | Z | 3.75 | 68.13 | 16.40 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.49 | 71.10 | 17.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.27 | 69.32 | 16.43 |      | 150.0 |         |
|           |                                                | Z | 2.31 | 69.61 | 16.60 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.87 | 70.15 | 17.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.72 | 69.17 | 16.50 |      | 150.0 |         |
|           |                                                | Z | 2.73 | 69.14 | 16.52 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.68 | 68.25 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.54 | 67.28 | 15.14 |      | 150.0 |         |
|           |                                                | Z | 2.58 | 67.43 | 15.28 |      | 150.0 |         |
| 10145-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.97 | 70.87 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.68 | 68.25 | 14.76 |      | 150.0 |         |
|           |                                                | Z | 1.73 | 68.59 | 15.05 |      | 150.0 |         |
| 10146-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 4.75 | 78.42 | 19.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.83 | 74.52 | 16.97 |      | 150.0 |         |
|           |                                                | Z | 4.41 | 76.61 | 18.14 |      | 150.0 |         |
| 10147-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 6.27 | 82.79 | 20.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.05 | 78.64 | 18.78 |      | 150.0 |         |
|           |                                                | Z | 5.67 | 80.46 | 19.79 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.26 | 68.70 | 16.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.14 | 67.97 | 16.22 |      | 150.0 |         |
|           |                                            | Z | 3.17 | 68.10 | 16.29 |      | 150.0 |         |
| 10150-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.36 | 68.50 | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.26 | 67.87 | 16.24 |      | 150.0 |         |
|           |                                            | Z | 3.28 | 67.96 | 16.30 |      | 150.0 |         |
| 10151-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 9.26 | 79.92 | 22.22 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 9.15 | 79.84 | 22.08 |      | 65.0  |         |
|           |                                            | Z | 8.96 | 78.94 | 21.70 |      | 65.0  |         |
| 10152-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 8.60 | 77.27 | 21.75 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.35 | 76.82 | 21.41 |      | 65.0  |         |
|           |                                            | Z | 8.46 | 76.64 | 21.35 |      | 65.0  |         |
| 10153-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 8.88 | 77.79 | 22.28 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.70 | 77.50 | 22.02 |      | 65.0  |         |
|           |                                            | Z | 8.75 | 77.18 | 21.89 |      | 65.0  |         |
| 10154-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.78 | 71.52 | 17.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.56 | 69.90 | 16.88 |      | 150.0 |         |
|           |                                            | Z | 2.60 | 70.17 | 17.01 |      | 150.0 |         |
| 10155-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.94 | 69.23 | 17.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.83 | 68.44 | 16.51 |      | 150.0 |         |
|           |                                            | Z | 2.85 | 68.47 | 16.54 |      | 150.0 |         |
| 10156-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 2.40 | 71.71 | 17.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.14 | 69.64 | 16.49 |      | 150.0 |         |
|           |                                            | Z | 2.19 | 69.95 | 16.67 |      | 150.0 |         |
| 10157-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.56 | 69.20 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.39 | 67.98 | 15.37 |      | 150.0 |         |
|           |                                            | Z | 2.42 | 68.11 | 15.51 |      | 150.0 |         |
| 10158-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 3.10 | 69.22 | 17.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.99 | 68.55 | 16.64 |      | 150.0 |         |
|           |                                            | Z | 3.00 | 68.53 | 16.65 |      | 150.0 |         |
| 10159-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.68 | 69.58 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.51 | 68.44 | 15.68 |      | 150.0 |         |
|           |                                            | Z | 2.54 | 68.50 | 15.78 |      | 150.0 |         |
| 10160-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 3.14 | 70.23 | 17.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.97 | 69.12 | 16.58 |      | 150.0 |         |
|           |                                            | Z | 3.01 | 69.30 | 16.67 |      | 150.0 |         |
| 10161-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.25 | 68.37 | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.15 | 67.75 | 16.20 |      | 150.0 |         |
|           |                                            | Z | 3.17 | 67.82 | 16.25 |      | 150.0 |         |
| 10162-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.35 | 68.34 | 16.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.25 | 67.77 | 16.24 |      | 150.0 |         |
|           |                                            | Z | 3.27 | 67.82 | 16.29 |      | 150.0 |         |
| 10166-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.16 | 70.95 | 20.14 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.09 | 70.57 | 19.65 |      | 150.0 |         |
|           |                                            | Z | 4.23 | 71.07 | 20.00 |      | 150.0 |         |
| 10167-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.42 | 74.49 | 20.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.38 | 74.26 | 20.45 |      | 150.0 |         |
|           |                                            | Z | 5.66 | 74.92 | 20.85 |      | 150.0 |         |

|           |                                            |   |       |        |       |      |       |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10168-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.88  | 76.24  | 21.91 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.94  | 76.40  | 21.68 |      | 150.0 |         |
|           |                                            | Z | 6.16  | 76.77  | 21.92 |      | 150.0 |         |
| 10169-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 4.00  | 73.62  | 21.32 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.90  | 72.96  | 20.64 |      | 150.0 |         |
|           |                                            | Z | 4.22  | 74.22  | 21.31 |      | 150.0 |         |
| 10170-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 6.31  | 81.51  | 24.09 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.48  | 81.75  | 23.78 |      | 150.0 |         |
|           |                                            | Z | 7.05  | 82.86  | 24.27 |      | 150.0 |         |
| 10171-AAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 5.08  | 76.75  | 21.32 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.94  | 75.94  | 20.54 |      | 150.0 |         |
|           |                                            | Z | 5.51  | 77.53  | 21.31 |      | 150.0 |         |
| 10172-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 28.35 | 107.78 | 33.34 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 28.59 | 107.61 | 32.92 |      | 65.0  |         |
|           |                                            | Z | 27.19 | 105.85 | 32.47 |      | 65.0  |         |
| 10173-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 29.50 | 104.02 | 30.66 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 34.69 | 106.60 | 31.03 |      | 65.0  |         |
|           |                                            | Z | 27.86 | 101.98 | 29.79 |      | 65.0  |         |
| 10174-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 23.87 | 98.93  | 28.69 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 26.66 | 100.64 | 28.84 |      | 65.0  |         |
|           |                                            | Z | 22.60 | 97.09  | 27.89 |      | 65.0  |         |
| 10175-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 3.94  | 73.23  | 21.05 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.83  | 72.52  | 20.34 |      | 150.0 |         |
|           |                                            | Z | 4.15  | 73.80  | 21.02 |      | 150.0 |         |
| 10176-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 6.32  | 81.53  | 24.10 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.49  | 81.78  | 23.79 |      | 150.0 |         |
|           |                                            | Z | 7.06  | 82.89  | 24.28 |      | 150.0 |         |
| 10177-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.98  | 73.42  | 21.16 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.88  | 72.74  | 20.47 |      | 150.0 |         |
|           |                                            | Z | 4.19  | 74.00  | 21.14 |      | 150.0 |         |
| 10178-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 6.20  | 81.16  | 23.93 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.35  | 81.32  | 23.59 |      | 150.0 |         |
|           |                                            | Z | 6.91  | 82.48  | 24.09 |      | 150.0 |         |
| 10179-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 5.64  | 78.94  | 22.55 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.60  | 78.53  | 21.96 |      | 150.0 |         |
|           |                                            | Z | 6.18  | 79.93  | 22.60 |      | 150.0 |         |
| 10180-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 5.06  | 76.62  | 21.25 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.91  | 75.79  | 20.46 |      | 150.0 |         |
|           |                                            | Z | 5.47  | 77.39  | 21.24 |      | 150.0 |         |
| 10181-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.98  | 73.40  | 21.15 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.87  | 72.72  | 20.46 |      | 150.0 |         |
|           |                                            | Z | 4.18  | 73.98  | 21.13 |      | 150.0 |         |
| 10182-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 6.19  | 81.13  | 23.92 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 6.34  | 81.29  | 23.57 |      | 150.0 |         |
|           |                                            | Z | 6.90  | 82.45  | 24.08 |      | 150.0 |         |
| 10183-AAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 5.05  | 76.59  | 21.24 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.90  | 75.76  | 20.45 |      | 150.0 |         |
|           |                                            | Z | 5.46  | 77.36  | 21.23 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.99 | 73.45 | 21.17 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.89 | 72.78 | 20.49 |      | 150.0 |         |
|           |                                               | Z | 4.20 | 74.03 | 21.16 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 6.23 | 81.21 | 23.95 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.37 | 81.39 | 23.62 |      | 150.0 |         |
|           |                                               | Z | 6.94 | 82.53 | 24.12 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 5.08 | 76.67 | 21.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.93 | 75.84 | 20.48 |      | 150.0 |         |
|           |                                               | Z | 5.49 | 77.44 | 21.26 |      | 150.0 |         |
| 10187-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 4.00 | 73.48 | 21.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.89 | 72.80 | 20.53 |      | 150.0 |         |
|           |                                               | Z | 4.21 | 74.07 | 21.20 |      | 150.0 |         |
| 10188-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 6.48 | 82.07 | 24.38 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 6.71 | 82.45 | 24.13 |      | 150.0 |         |
|           |                                               | Z | 7.27 | 83.49 | 24.57 |      | 150.0 |         |
| 10189-AAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 5.21 | 77.21 | 21.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.09 | 76.46 | 20.83 |      | 150.0 |         |
|           |                                               | Z | 5.66 | 78.03 | 21.58 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.79 | 66.98 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.74 | 66.79 | 16.32 |      | 150.0 |         |
|           |                                               | Z | 4.76 | 66.81 | 16.35 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 5.00 | 67.38 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.95 | 67.18 | 16.43 |      | 150.0 |         |
|           |                                               | Z | 4.97 | 67.21 | 16.46 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 5.04 | 67.38 | 16.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.99 | 67.18 | 16.43 |      | 150.0 |         |
|           |                                               | Z | 5.00 | 67.20 | 16.45 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.82 | 67.11 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 66.91 | 16.36 |      | 150.0 |         |
|           |                                               | Z | 4.78 | 66.93 | 16.39 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 5.02 | 67.40 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.97 | 67.20 | 16.44 |      | 150.0 |         |
|           |                                               | Z | 4.98 | 67.22 | 16.46 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 5.05 | 67.39 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.00 | 67.20 | 16.44 |      | 150.0 |         |
|           |                                               | Z | 5.01 | 67.21 | 16.46 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.77 | 67.13 | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.72 | 66.92 | 16.33 |      | 150.0 |         |
|           |                                               | Z | 4.73 | 66.95 | 16.36 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 5.02 | 67.40 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.97 | 67.20 | 16.44 |      | 150.0 |         |
|           |                                               | Z | 4.99 | 67.23 | 16.47 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 5.05 | 67.33 | 16.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.00 | 67.13 | 16.44 |      | 150.0 |         |
|           |                                               | Z | 5.02 | 67.15 | 16.46 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.36 | 67.67 | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.31 | 67.46 | 16.57 |      | 150.0 |         |
|           |                                               | Z | 5.32 | 67.50 | 16.60 |      | 150.0 |         |

|           |                                           |   |       |        |       |      |       |         |
|-----------|-------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.75  | 68.00  | 16.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.70  | 67.82  | 16.77 |      | 150.0 |         |
|           |                                           | Z | 5.71  | 67.82  | 16.78 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.42  | 67.80  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.36  | 67.58  | 16.55 |      | 150.0 |         |
|           |                                           | Z | 5.38  | 67.63  | 16.58 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 3.07  | 66.80  | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 3.00  | 66.35  | 15.75 |      | 150.0 |         |
|           |                                           | Z | 3.01  | 66.39  | 15.81 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 30.74 | 104.89 | 30.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 36.94 | 107.88 | 31.47 |      | 65.0  |         |
|           |                                           | Z | 29.00 | 102.81 | 30.11 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 24.57 | 99.58  | 28.97 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 28.65 | 102.05 | 29.35 |      | 65.0  |         |
|           |                                           | Z | 23.52 | 97.91  | 28.22 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 30.31 | 109.61 | 33.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 29.44 | 108.70 | 33.37 |      | 65.0  |         |
|           |                                           | Z | 27.38 | 106.50 | 32.79 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 29.49 | 104.00 | 30.66 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 34.74 | 106.61 | 31.04 |      | 65.0  |         |
|           |                                           | Z | 27.87 | 101.97 | 29.80 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 23.73 | 98.88  | 28.69 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 27.25 | 101.06 | 28.99 |      | 65.0  |         |
|           |                                           | Z | 22.75 | 97.24  | 27.95 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 29.15 | 108.72 | 33.67 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 27.96 | 107.57 | 32.97 |      | 65.0  |         |
|           |                                           | Z | 26.38 | 105.67 | 32.48 |      | 65.0  |         |
| 10232-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 29.48 | 104.00 | 30.66 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 34.72 | 106.61 | 31.04 |      | 65.0  |         |
|           |                                           | Z | 27.86 | 101.97 | 29.80 |      | 65.0  |         |
| 10233-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 23.75 | 98.91  | 28.70 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 27.26 | 101.08 | 28.99 |      | 65.0  |         |
|           |                                           | Z | 22.77 | 97.26  | 27.96 |      | 65.0  |         |
| 10234-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 27.90 | 107.69 | 33.28 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 26.50 | 106.35 | 32.52 |      | 65.0  |         |
|           |                                           | Z | 25.32 | 104.71 | 32.10 |      | 65.0  |         |
| 10235-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 29.56 | 104.06 | 30.68 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 34.83 | 106.68 | 31.06 |      | 65.0  |         |
|           |                                           | Z | 27.92 | 102.02 | 29.81 |      | 65.0  |         |
| 10236-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 23.93 | 99.02  | 28.74 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 27.48 | 101.20 | 29.02 |      | 65.0  |         |
|           |                                           | Z | 22.92 | 97.36  | 27.99 |      | 65.0  |         |
| 10237-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 29.43 | 108.94 | 33.73 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 28.18 | 107.75 | 33.02 |      | 65.0  |         |
|           |                                           | Z | 26.59 | 105.85 | 32.53 |      | 65.0  |         |
| 10238-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 29.51 | 104.02 | 30.67 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 34.75 | 106.63 | 31.04 |      | 65.0  |         |
|           |                                           | Z | 27.87 | 101.98 | 29.80 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 23.77 | 98.93  | 28.71 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 27.27 | 101.10 | 29.00 |      | 65.0 |         |
|           |                                            | Z | 22.78 | 97.29  | 27.97 |      | 65.0 |         |
| 10240-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 29.33 | 108.88 | 33.71 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 28.09 | 107.69 | 33.00 |      | 65.0 |         |
|           |                                            | Z | 26.51 | 105.80 | 32.51 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 12.97 | 86.83  | 27.84 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 12.74 | 86.49  | 27.42 |      | 65.0 |         |
|           |                                            | Z | 13.39 | 87.03  | 27.74 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 11.77 | 84.58  | 26.87 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 12.19 | 85.46  | 26.94 |      | 65.0 |         |
|           |                                            | Z | 12.90 | 86.14  | 27.32 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 9.86  | 82.57  | 26.93 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.88  | 82.69  | 26.70 |      | 65.0 |         |
|           |                                            | Z | 10.64 | 83.89  | 27.31 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 10.27 | 81.73  | 22.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.27 | 81.67  | 21.99 |      | 65.0 |         |
|           |                                            | Z | 10.19 | 81.13  | 21.98 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 10.17 | 81.33  | 22.14 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.15 | 81.24  | 21.78 |      | 65.0 |         |
|           |                                            | Z | 10.11 | 80.77  | 21.80 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 9.71  | 83.45  | 22.80 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.49  | 83.12  | 22.47 |      | 65.0 |         |
|           |                                            | Z | 8.94  | 81.57  | 21.97 |      | 65.0 |         |
| 10247-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 8.20  | 78.33  | 21.34 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.00  | 78.01  | 21.02 |      | 65.0 |         |
|           |                                            | Z | 7.96  | 77.44  | 20.86 |      | 65.0 |         |
| 10248-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 8.23  | 77.94  | 21.17 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.00  | 77.54  | 20.82 |      | 65.0 |         |
|           |                                            | Z | 8.02  | 77.11  | 20.72 |      | 65.0 |         |
| 10249-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 10.15 | 84.14  | 23.49 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.98  | 83.94  | 23.24 |      | 65.0 |         |
|           |                                            | Z | 9.39  | 82.30  | 22.67 |      | 65.0 |         |
| 10250-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 8.79  | 79.35  | 22.70 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.63  | 79.16  | 22.48 |      | 65.0 |         |
|           |                                            | Z | 8.57  | 78.51  | 22.22 |      | 65.0 |         |
| 10251-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 8.44  | 77.55  | 21.73 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.21  | 77.13  | 21.40 |      | 65.0 |         |
|           |                                            | Z | 8.29  | 76.85  | 21.32 |      | 65.0 |         |
| 10252-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 9.81  | 82.69  | 23.38 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.69  | 82.59  | 23.21 |      | 65.0 |         |
|           |                                            | Z | 9.29  | 81.25  | 22.69 |      | 65.0 |         |
| 10253-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 8.37  | 76.69  | 21.57 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.14  | 76.24  | 21.23 |      | 65.0 |         |
|           |                                            | Z | 8.26  | 76.10  | 21.20 |      | 65.0 |         |
| 10254-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 8.69  | 77.25  | 22.08 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.50  | 76.93  | 21.80 |      | 65.0 |         |
|           |                                            | Z | 8.58  | 76.68  | 21.71 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 9.00 | 79.61 | 22.34 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.85 | 79.45 | 22.16 |      | 65.0 |         |
|           |                                             | Z | 8.73 | 78.67 | 21.83 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 9.74 | 80.69 | 21.31 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.59 | 80.32 | 20.81 |      | 65.0 |         |
|           |                                             | Z | 9.63 | 80.04 | 20.95 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 9.62 | 80.13 | 21.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.43 | 79.69 | 20.50 |      | 65.0 |         |
|           |                                             | Z | 9.55 | 79.55 | 20.70 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 9.09 | 82.16 | 21.89 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.77 | 81.62 | 21.46 |      | 65.0 |         |
|           |                                             | Z | 8.39 | 80.38 | 21.12 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 8.43 | 78.63 | 21.79 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.23 | 78.33 | 21.49 |      | 65.0 |         |
|           |                                             | Z | 8.20 | 77.76 | 21.31 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 8.46 | 78.42 | 21.72 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.27 | 78.12 | 21.43 |      | 65.0 |         |
|           |                                             | Z | 8.26 | 77.59 | 21.26 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 9.72 | 83.07 | 23.32 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.52 | 82.82 | 23.06 |      | 65.0 |         |
|           |                                             | Z | 9.11 | 81.46 | 22.57 |      | 65.0 |         |
| 10262-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 8.78 | 79.33 | 22.68 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.62 | 79.12 | 22.45 |      | 65.0 |         |
|           |                                             | Z | 8.57 | 78.49 | 22.19 |      | 65.0 |         |
| 10263-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 8.44 | 77.55 | 21.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.21 | 77.13 | 21.40 |      | 65.0 |         |
|           |                                             | Z | 8.29 | 76.86 | 21.32 |      | 65.0 |         |
| 10264-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 9.77 | 82.59 | 23.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.63 | 82.47 | 23.15 |      | 65.0 |         |
|           |                                             | Z | 9.25 | 81.16 | 22.64 |      | 65.0 |         |
| 10265-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 8.59 | 77.27 | 21.75 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.35 | 76.82 | 21.41 |      | 65.0 |         |
|           |                                             | Z | 8.46 | 76.64 | 21.35 |      | 65.0 |         |
| 10266-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 8.88 | 77.79 | 22.27 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.70 | 77.49 | 22.01 |      | 65.0 |         |
|           |                                             | Z | 8.76 | 77.18 | 21.88 |      | 65.0 |         |
| 10267-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 9.25 | 79.89 | 22.21 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.14 | 79.81 | 22.06 |      | 65.0 |         |
|           |                                             | Z | 8.95 | 78.92 | 21.69 |      | 65.0 |         |
| 10268-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 8.99 | 76.65 | 21.78 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.81 | 76.35 | 21.53 |      | 65.0 |         |
|           |                                             | Z | 8.91 | 76.18 | 21.46 |      | 65.0 |         |
| 10269-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 8.91 | 76.26 | 21.70 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.73 | 75.96 | 21.44 |      | 65.0 |         |
|           |                                             | Z | 8.84 | 75.83 | 21.39 |      | 65.0 |         |
| 10270-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 8.90 | 77.57 | 21.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.79 | 77.49 | 21.27 |      | 65.0 |         |
|           |                                             | Z | 8.75 | 76.94 | 21.02 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.78  | 67.12 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.71  | 66.52 | 15.56 |      | 150.0 |         |
|           |                                                                    | Z | 2.72  | 66.59 | 15.63 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.98  | 70.91 | 17.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.76  | 68.59 | 16.10 |      | 150.0 |         |
|           |                                                                    | Z | 1.80  | 69.04 | 16.33 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 6.79  | 72.27 | 16.39 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 6.45  | 71.67 | 15.76 |      | 50.0  |         |
|           |                                                                    | Z | 6.90  | 72.24 | 16.49 |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 10.13 | 81.40 | 22.32 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.29 | 81.97 | 22.29 |      | 50.0  |         |
|           |                                                                    | Z | 9.77  | 80.32 | 21.92 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 10.33 | 81.63 | 22.41 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.47 | 82.16 | 22.36 |      | 50.0  |         |
|           |                                                                    | Z | 9.96  | 80.55 | 22.00 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 2.27  | 74.32 | 17.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.81  | 70.49 | 15.86 |      | 150.0 |         |
|           |                                                                    | Z | 1.87  | 70.91 | 16.13 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 1.36  | 72.30 | 17.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.04  | 67.63 | 14.46 |      | 150.0 |         |
|           |                                                                    | Z | 1.08  | 68.31 | 14.87 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.99  | 79.46 | 20.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.29  | 71.82 | 16.85 |      | 150.0 |         |
|           |                                                                    | Z | 1.35  | 72.59 | 17.26 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 3.14  | 87.23 | 23.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.79  | 77.07 | 19.53 |      | 150.0 |         |
|           |                                                                    | Z | 1.82  | 77.43 | 19.74 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 10.44 | 82.93 | 24.52 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.27 | 82.91 | 24.32 |      | 50.0  |         |
|           |                                                                    | Z | 10.06 | 81.64 | 23.93 |      | 50.0  |         |
| 10297-AAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 3.29  | 71.99 | 17.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 3.04  | 70.48 | 16.94 |      | 150.0 |         |
|           |                                                                    | Z | 3.09  | 70.76 | 17.06 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 2.22  | 71.79 | 17.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.94  | 69.36 | 15.82 |      | 150.0 |         |
|           |                                                                    | Z | 1.98  | 69.66 | 16.04 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 4.69  | 77.67 | 19.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 4.12  | 75.07 | 17.83 |      | 150.0 |         |
|           |                                                                    | Z | 4.54  | 76.51 | 18.69 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 3.41  | 71.70 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 3.02  | 69.50 | 14.72 |      | 150.0 |         |
|           |                                                                    | Z | 3.36  | 70.96 | 15.66 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 6.06  | 68.71 | 19.27 | 4.17 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 5.82  | 67.97 | 18.75 |      | 80.0  |         |
|           |                                                                    | Z | 6.19  | 69.17 | 19.41 |      | 80.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 6.72  | 70.11 | 20.48 | 4.96 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 6.33  | 68.61 | 19.48 |      | 80.0  |         |
|           |                                                                    | Z | 6.73  | 69.98 | 20.27 |      | 80.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 6.65 | 70.48 | 20.70 | 4.96  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.20 | 68.74 | 19.57 |       | 80.0  |         |
|           |                                                                     | Z | 6.66 | 70.35 | 20.48 |       | 80.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 6.16 | 69.37 | 19.66 | 4.17  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.81 | 67.99 | 18.75 |       | 80.0  |         |
|           |                                                                     | Z | 6.16 | 69.23 | 19.45 |       | 80.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 9.30 | 81.07 | 26.04 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 8.89 | 81.17 | 26.15 |       | 50.0  |         |
|           |                                                                     | Z | 9.30 | 80.60 | 25.61 |       | 50.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 7.60 | 74.94 | 23.58 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.58 | 71.27 | 21.48 |       | 50.0  |         |
|           |                                                                     | Z | 7.65 | 74.77 | 23.31 |       | 50.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 7.89 | 76.12 | 23.89 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.67 | 71.96 | 21.62 |       | 50.0  |         |
|           |                                                                     | Z | 7.93 | 75.88 | 23.59 |       | 50.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 8.03 | 76.77 | 24.18 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.71 | 72.32 | 21.80 |       | 50.0  |         |
|           |                                                                     | Z | 8.07 | 76.51 | 23.87 |       | 50.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 7.75 | 75.30 | 23.75 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.70 | 71.56 | 21.63 |       | 50.0  |         |
|           |                                                                     | Z | 7.79 | 75.10 | 23.47 |       | 50.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 7.67 | 75.32 | 23.64 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.59 | 71.48 | 21.48 |       | 50.0  |         |
|           |                                                                     | Z | 7.72 | 75.12 | 23.36 |       | 50.0  |         |
| 10311-AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.65 | 71.15 | 17.38 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.40 | 69.80 | 16.59 |       | 150.0 |         |
|           |                                                                     | Z | 3.45 | 70.04 | 16.69 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 8.19 | 79.62 | 19.75 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 7.93 | 79.22 | 19.41 |       | 70.0  |         |
|           |                                                                     | Z | 7.49 | 77.80 | 19.02 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 9.48 | 83.29 | 23.38 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 9.95 | 84.52 | 23.69 |       | 30.0  |         |
|           |                                                                     | Z | 8.48 | 80.77 | 22.38 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.25 | 66.08 | 16.91 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.20 | 64.89 | 15.87 |       | 150.0 |         |
|           |                                                                     | Z | 1.21 | 65.13 | 16.03 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.90 | 67.19 | 16.76 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.85 | 66.99 | 16.52 |       | 150.0 |         |
|           |                                                                     | Z | 4.87 | 67.02 | 16.55 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.90 | 67.19 | 16.76 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.85 | 66.99 | 16.52 |       | 150.0 |         |
|           |                                                                     | Z | 4.87 | 67.02 | 16.55 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 5.03 | 67.46 | 16.67 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.97 | 67.23 | 16.42 |       | 150.0 |         |
|           |                                                                     | Z | 4.99 | 67.27 | 16.45 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.60 | 67.40 | 16.67 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.56 | 67.25 | 16.46 |       | 150.0 |         |
|           |                                                                     | Z | 5.57 | 67.25 | 16.48 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.93   | 68.04  | 16.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.88   | 67.87  | 16.62 |      | 150.0 |         |
|           |                                                                                | Z | 5.89   | 67.90  | 16.63 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 2.27   | 74.32  | 17.90 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.81   | 70.49  | 15.86 |      | 115.0 |         |
|           |                                                                                | Z | 1.87   | 70.91  | 16.13 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 2.27   | 74.32  | 17.90 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.81   | 70.49  | 15.86 |      | 115.0 |         |
|           |                                                                                | Z | 1.87   | 70.91  | 16.13 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 100.00 | 127.40 | 33.82 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 122.61 | 31.43 |      | 100.0 |         |
|           |                                                                                | Z | 100.00 | 123.45 | 32.03 |      | 100.0 |         |
| 10410-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 100.00 | 121.97 | 31.96 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 119.93 | 30.78 |      | 80.0  |         |
|           |                                                                                | Z | 100.00 | 120.31 | 31.22 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.07   | 64.27  | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.04   | 63.30  | 14.96 |      | 150.0 |         |
|           |                                                                                | Z | 1.04   | 63.46  | 15.09 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.79   | 67.01  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.74   | 66.82  | 16.35 |      | 150.0 |         |
|           |                                                                                | Z | 4.76   | 66.83  | 16.37 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.79   | 67.01  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.74   | 66.82  | 16.35 |      | 150.0 |         |
|           |                                                                                | Z | 4.76   | 66.83  | 16.37 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.77   | 67.15  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.73   | 66.95  | 16.35 |      | 150.0 |         |
|           |                                                                                | Z | 4.74   | 66.96  | 16.37 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.80   | 67.11  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.75   | 66.92  | 16.36 |      | 150.0 |         |
|           |                                                                                | Z | 4.76   | 66.93  | 16.38 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.93   | 67.11  | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.88   | 66.93  | 16.38 |      | 150.0 |         |
|           |                                                                                | Z | 4.90   | 66.94  | 16.40 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 5.16   | 67.53  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.10   | 67.33  | 16.53 |      | 150.0 |         |
|           |                                                                                | Z | 5.12   | 67.36  | 16.55 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 5.06   | 67.46  | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.01   | 67.26  | 16.49 |      | 150.0 |         |
|           |                                                                                | Z | 5.02   | 67.28  | 16.51 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.63   | 67.84  | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.58   | 67.63  | 16.65 |      | 150.0 |         |
|           |                                                                                | Z | 5.59   | 67.66  | 16.67 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.65   | 67.87  | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.59   | 67.67  | 16.66 |      | 150.0 |         |
|           |                                                                                | Z | 5.60   | 67.69  | 16.68 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.67   | 67.88  | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.61   | 67.68  | 16.67 |      | 150.0 |         |
|           |                                                                | Z | 5.63   | 67.72  | 16.69 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.49   | 70.32  | 18.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.47   | 70.35  | 18.30 |      | 150.0 |         |
|           |                                                                | Z | 4.43   | 69.94  | 18.10 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.57   | 67.64  | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.50   | 67.37  | 16.44 |      | 150.0 |         |
|           |                                                                | Z | 4.52   | 67.40  | 16.48 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.84   | 67.52  | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.78   | 67.30  | 16.46 |      | 150.0 |         |
|           |                                                                | Z | 4.81   | 67.32  | 16.49 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 5.08   | 67.52  | 16.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.02   | 67.32  | 16.52 |      | 150.0 |         |
|           |                                                                | Z | 5.04   | 67.34  | 16.54 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.58   | 71.00  | 18.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.56   | 71.04  | 18.32 |      | 150.0 |         |
|           |                                                                | Z | 4.50   | 70.55  | 18.09 |      | 150.0 |         |
| 10435-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 121.83 | 31.89 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 119.78 | 30.72 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 120.18 | 31.16 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.91   | 67.81  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.82   | 67.43  | 16.03 |      | 150.0 |         |
|           |                                                                | Z | 3.85   | 67.45  | 16.10 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.37   | 67.41  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.31   | 67.14  | 16.30 |      | 150.0 |         |
|           |                                                                | Z | 4.33   | 67.16  | 16.33 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.61   | 67.35  | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.56   | 67.11  | 16.36 |      | 150.0 |         |
|           |                                                                | Z | 4.57   | 67.13  | 16.39 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.78   | 67.27  | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.73   | 67.06  | 16.37 |      | 150.0 |         |
|           |                                                                | Z | 4.75   | 67.08  | 16.40 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.87   | 68.19  | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.76   | 67.74  | 15.84 |      | 150.0 |         |
|           |                                                                | Z | 3.80   | 67.77  | 15.91 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.48   | 68.45  | 17.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.43   | 68.27  | 16.83 |      | 150.0 |         |
|           |                                                                | Z | 6.44   | 68.31  | 16.86 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.93   | 65.66  | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.90   | 65.46  | 16.09 |      | 150.0 |         |
|           |                                                                | Z | 3.90   | 65.49  | 16.13 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.65   | 67.27  | 15.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.56   | 66.88  | 15.33 |      | 150.0 |         |
|           |                                                                | Z | 3.59   | 66.88  | 15.43 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.75   | 65.30  | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.56   | 64.61  | 15.72 |      | 150.0 |         |
|           |                                                                | Z | 4.62   | 64.74  | 15.85 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 1.26   | 74.40  | 19.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.98   | 69.11  | 16.84 |      | 150.0 |         |
|           |                                                                   | Z | 1.02   | 70.09  | 17.34 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 124.67 | 33.28 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 122.71 | 32.15 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 122.52 | 32.32 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 112.53 | 27.42 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.84 | 25.94 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.74 | 26.63 |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 110.09 | 26.24 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 107.30 | 24.71 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.46 | 25.52 |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 123.17 | 32.44 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.02 | 31.22 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 121.02 | 31.48 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 112.13 | 27.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.39 | 25.71 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.36 | 26.43 |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 109.70 | 26.05 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 106.88 | 24.51 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.09 | 25.34 |      | 80.0  |         |
| 10467-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 123.35 | 32.52 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.21 | 31.30 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 121.18 | 31.55 |      | 80.0  |         |
| 10468-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 112.26 | 27.27 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.52 | 25.77 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.48 | 26.49 |      | 80.0  |         |
| 10469-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 109.71 | 26.05 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 106.88 | 24.50 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.10 | 25.34 |      | 80.0  |         |
| 10470-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 123.38 | 32.53 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.23 | 31.30 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 121.21 | 31.55 |      | 80.0  |         |
| 10471-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 112.22 | 27.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.48 | 25.75 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.44 | 26.46 |      | 80.0  |         |
| 10472-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 109.68 | 26.03 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 106.84 | 24.48 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.06 | 25.32 |      | 80.0  |         |
| 10473-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 123.36 | 32.52 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 121.21 | 31.29 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 121.18 | 31.54 |      | 80.0  |         |
| 10474-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 112.23 | 27.26 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 109.49 | 25.75 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 110.45 | 26.47 |      | 80.0  |         |
| 10475-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 109.69 | 26.03 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 106.85 | 24.48 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 108.07 | 25.32 |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 112.10 | 27.19 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 109.35 | 25.68 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 110.33 | 26.40 |      | 80.0 |         |
| 10478-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 109.65 | 26.01 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 106.81 | 24.47 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 108.04 | 25.30 |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 14.38  | 94.20  | 26.88 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 12.62  | 91.51  | 25.59 |      | 80.0 |         |
|           |                                                                     | Z | 11.98  | 90.33  | 25.40 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 16.92  | 91.85  | 24.70 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 16.07  | 90.43  | 23.78 |      | 80.0 |         |
|           |                                                                     | Z | 14.43  | 88.66  | 23.48 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 15.52  | 89.82  | 23.79 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 14.42  | 88.14  | 22.78 |      | 80.0 |         |
|           |                                                                     | Z | 13.29  | 86.80  | 22.62 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.56   | 82.70  | 21.88 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.34   | 79.89  | 20.64 |      | 80.0 |         |
|           |                                                                     | Z | 6.13   | 78.95  | 20.35 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 10.42  | 84.68  | 22.62 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 9.52   | 82.90  | 21.60 |      | 80.0 |         |
|           |                                                                     | Z | 9.24   | 82.26  | 21.60 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 9.76   | 83.43  | 22.21 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 8.92   | 81.70  | 21.20 |      | 80.0 |         |
|           |                                                                     | Z | 8.78   | 81.26  | 21.26 |      | 80.0 |         |
| 10485-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.43   | 82.48  | 22.31 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.34   | 79.89  | 21.17 |      | 80.0 |         |
|           |                                                                     | Z | 6.26   | 79.21  | 20.92 |      | 80.0 |         |
| 10486-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.54   | 75.02  | 19.37 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.16   | 73.91  | 18.72 |      | 80.0 |         |
|           |                                                                     | Z | 5.15   | 73.47  | 18.58 |      | 80.0 |         |
| 10487-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.49   | 74.50  | 19.17 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.13   | 73.46  | 18.54 |      | 80.0 |         |
|           |                                                                     | Z | 5.13   | 73.07  | 18.42 |      | 80.0 |         |
| 10488-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 6.90   | 79.78  | 21.64 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.14   | 77.86  | 20.75 |      | 80.0 |         |
|           |                                                                     | Z | 6.18   | 77.51  | 20.58 |      | 80.0 |         |
| 10489-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.38   | 73.43  | 19.44 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.09   | 72.55  | 18.91 |      | 80.0 |         |
|           |                                                                     | Z | 5.16   | 72.40  | 18.83 |      | 80.0 |         |
| 10490-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.41   | 72.95  | 19.27 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.14   | 72.16  | 18.78 |      | 80.0 |         |
|           |                                                                     | Z | 5.21   | 72.02  | 18.71 |      | 80.0 |         |
| 10491-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 6.32   | 76.48  | 20.47 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.85   | 75.21  | 19.82 |      | 80.0 |         |
|           |                                                                     | Z | 5.92   | 75.01  | 19.70 |      | 80.0 |         |
| 10492-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.50   | 72.00  | 19.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.27   | 71.31  | 18.59 |      | 80.0 |         |
|           |                                                                     | Z | 5.36   | 71.28  | 18.56 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.54 | 71.72 | 18.94 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.32 | 71.08 | 18.52 |      | 80.0 |         |
|           |                                                                      | Z | 5.41 | 71.05 | 18.49 |      | 80.0 |         |
| 10494-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.25 | 78.81 | 21.14 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.59 | 77.27 | 20.41 |      | 80.0 |         |
|           |                                                                      | Z | 6.62 | 76.95 | 20.25 |      | 80.0 |         |
| 10495-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.65 | 72.70 | 19.29 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.39 | 71.95 | 18.83 |      | 80.0 |         |
|           |                                                                      | Z | 5.48 | 71.90 | 18.78 |      | 80.0 |         |
| 10496-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.64 | 72.15 | 19.11 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.41 | 71.48 | 18.68 |      | 80.0 |         |
|           |                                                                      | Z | 5.50 | 71.45 | 18.64 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.62 | 80.74 | 20.69 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.48 | 77.81 | 19.35 |      | 80.0 |         |
|           |                                                                      | Z | 5.31 | 76.98 | 19.14 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.90 | 73.48 | 17.22 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.27 | 71.53 | 16.16 |      | 80.0 |         |
|           |                                                                      | Z | 4.35 | 71.46 | 16.28 |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.83 | 72.93 | 16.89 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.21 | 71.00 | 15.82 |      | 80.0 |         |
|           |                                                                      | Z | 4.31 | 71.03 | 15.99 |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.85 | 80.51 | 21.77 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.00 | 78.35 | 20.77 |      | 80.0 |         |
|           |                                                                      | Z | 6.00 | 77.87 | 20.57 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.43 | 74.16 | 19.30 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.10 | 73.18 | 18.71 |      | 80.0 |         |
|           |                                                                      | Z | 5.13 | 72.87 | 18.60 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.44 | 73.80 | 19.13 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.13 | 72.89 | 18.57 |      | 80.0 |         |
|           |                                                                      | Z | 5.15 | 72.59 | 18.46 |      | 80.0 |         |
| 10503-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.81 | 79.57 | 21.56 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.06 | 77.64 | 20.66 |      | 80.0 |         |
|           |                                                                      | Z | 6.11 | 77.33 | 20.51 |      | 80.0 |         |
| 10504-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.36 | 73.36 | 19.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.07 | 72.47 | 18.86 |      | 80.0 |         |
|           |                                                                      | Z | 5.14 | 72.33 | 18.79 |      | 80.0 |         |
| 10505-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.38 | 72.87 | 19.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.11 | 72.07 | 18.73 |      | 80.0 |         |
|           |                                                                      | Z | 5.19 | 71.95 | 18.67 |      | 80.0 |         |
| 10506-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 7.19 | 78.66 | 21.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.54 | 77.11 | 20.34 |      | 80.0 |         |
|           |                                                                      | Z | 6.57 | 76.81 | 20.18 |      | 80.0 |         |
| 10507-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.63 | 72.64 | 19.26 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.37 | 71.89 | 18.79 |      | 80.0 |         |
|           |                                                                      | Z | 5.46 | 71.85 | 18.75 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.63 | 72.09 | 19.07 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.39 | 71.41 | 18.64 |      | 80.0  |         |
|           |                                                                     | Z | 5.49 | 71.39 | 18.61 |      | 80.0  |         |
| 10509-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.80 | 75.80 | 19.99 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.40 | 74.81 | 19.47 |      | 80.0  |         |
|           |                                                                     | Z | 6.44 | 74.60 | 19.35 |      | 80.0  |         |
| 10510-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 6.00 | 71.87 | 18.97 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.78 | 71.27 | 18.59 |      | 80.0  |         |
|           |                                                                     | Z | 5.87 | 71.27 | 18.56 |      | 80.0  |         |
| 10511-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.98 | 71.43 | 18.84 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.78 | 70.88 | 18.48 |      | 80.0  |         |
|           |                                                                     | Z | 5.87 | 70.89 | 18.46 |      | 80.0  |         |
| 10512-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 7.65 | 78.39 | 20.81 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 7.04 | 77.04 | 20.17 |      | 80.0  |         |
|           |                                                                     | Z | 7.05 | 76.73 | 20.01 |      | 80.0  |         |
| 10513-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.99 | 72.54 | 19.22 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.74 | 71.83 | 18.79 |      | 80.0  |         |
|           |                                                                     | Z | 5.84 | 71.84 | 18.77 |      | 80.0  |         |
| 10514-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.89 | 71.84 | 19.00 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.67 | 71.22 | 18.61 |      | 80.0  |         |
|           |                                                                     | Z | 5.77 | 71.23 | 18.59 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 1.04 | 64.60 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.01 | 63.51 | 15.03 |      | 150.0 |         |
|           |                                                                     | Z | 1.00 | 63.69 | 15.18 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 1.58 | 89.32 | 26.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.68 | 71.98 | 18.30 |      | 150.0 |         |
|           |                                                                     | Z | 0.78 | 74.89 | 19.62 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.96 | 68.28 | 17.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.87 | 65.73 | 15.83 |      | 150.0 |         |
|           |                                                                     | Z | 0.88 | 66.23 | 16.14 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.79 | 67.10 | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.74 | 66.90 | 16.34 |      | 150.0 |         |
|           |                                                                     | Z | 4.76 | 66.92 | 16.36 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 5.03 | 67.42 | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.98 | 67.22 | 16.49 |      | 150.0 |         |
|           |                                                                     | Z | 5.00 | 67.24 | 16.51 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.88 | 67.42 | 16.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.82 | 67.20 | 16.42 |      | 150.0 |         |
|           |                                                                     | Z | 4.84 | 67.23 | 16.44 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.81 | 67.44 | 16.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75 | 67.21 | 16.40 |      | 150.0 |         |
|           |                                                                     | Z | 4.77 | 67.24 | 16.43 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.84 | 67.34 | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.79 | 67.14 | 16.41 |      | 150.0 |         |
|           |                                                                     | Z | 4.81 | 67.14 | 16.43 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.72 | 67.29 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.66 | 67.07 | 16.29 |      | 150.0 |         |
|           |                                                            | Z | 4.68 | 67.09 | 16.31 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.80 | 67.32 | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.75 | 67.12 | 16.41 |      | 150.0 |         |
|           |                                                            | Z | 4.77 | 67.13 | 16.43 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.74 | 66.35 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.69 | 66.14 | 16.00 |      | 150.0 |         |
|           |                                                            | Z | 4.71 | 66.16 | 16.01 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.97 | 66.77 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.91 | 66.56 | 16.14 |      | 150.0 |         |
|           |                                                            | Z | 4.92 | 66.58 | 16.16 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.88 | 66.77 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.82 | 66.54 | 16.10 |      | 150.0 |         |
|           |                                                            | Z | 4.84 | 66.57 | 16.13 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.90 | 66.79 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.84 | 66.56 | 16.14 |      | 150.0 |         |
|           |                                                            | Z | 4.86 | 66.59 | 16.16 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.90 | 66.79 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.84 | 66.56 | 16.14 |      | 150.0 |         |
|           |                                                            | Z | 4.86 | 66.59 | 16.16 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.93 | 66.97 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.86 | 66.72 | 16.17 |      | 150.0 |         |
|           |                                                            | Z | 4.88 | 66.75 | 16.19 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.77 | 66.86 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.71 | 66.60 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 4.73 | 66.64 | 16.15 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.92 | 66.80 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.86 | 66.58 | 16.11 |      | 150.0 |         |
|           |                                                            | Z | 4.87 | 66.60 | 16.13 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.41 | 66.95 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.35 | 66.75 | 16.19 |      | 150.0 |         |
|           |                                                            | Z | 5.37 | 66.78 | 16.21 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.48 | 67.09 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.43 | 66.89 | 16.25 |      | 150.0 |         |
|           |                                                            | Z | 5.44 | 66.92 | 16.26 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.35 | 67.09 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.29 | 66.87 | 16.23 |      | 150.0 |         |
|           |                                                            | Z | 5.30 | 66.90 | 16.24 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.41 | 67.05 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.36 | 66.85 | 16.22 |      | 150.0 |         |
|           |                                                            | Z | 5.37 | 66.87 | 16.23 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.54 | 67.15 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.48 | 66.94 | 16.30 |      | 150.0 |         |
|           |                                                            | Z | 5.50 | 66.97 | 16.32 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.43 | 67.07 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.37 | 66.86 | 16.28 |      | 150.0 |         |
|           |                                                            | Z | 5.38 | 66.89 | 16.29 |      | 150.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)   | X | 5.42 | 67.03 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.36 | 66.81 | 16.25 |      | 150.0 |         |
|           |                                                     | Z | 5.38 | 66.86 | 16.28 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)   | X | 5.56 | 67.00 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.50 | 66.81 | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 5.52 | 66.84 | 16.28 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)   | X | 5.65 | 67.02 | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.60 | 66.83 | 16.28 |      | 150.0 |         |
|           |                                                     | Z | 5.62 | 66.87 | 16.31 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)   | X | 5.67 | 67.03 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.62 | 66.85 | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 5.63 | 66.88 | 16.19 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)   | X | 5.89 | 67.44 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.84 | 67.25 | 16.31 |      | 150.0 |         |
|           |                                                     | Z | 5.84 | 67.26 | 16.32 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)   | X | 5.78 | 67.35 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.73 | 67.16 | 16.29 |      | 150.0 |         |
|           |                                                     | Z | 5.74 | 67.19 | 16.30 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)   | X | 5.88 | 67.44 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.82 | 67.23 | 16.31 |      | 150.0 |         |
|           |                                                     | Z | 5.84 | 67.28 | 16.34 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)   | X | 6.24 | 68.68 | 17.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.15 | 68.36 | 16.84 |      | 150.0 |         |
|           |                                                     | Z | 6.16 | 68.38 | 16.86 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)   | X | 5.80 | 67.28 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.75 | 67.09 | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 5.76 | 67.12 | 16.27 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)   | X | 5.83 | 67.43 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.77 | 67.22 | 16.29 |      | 150.0 |         |
|           |                                                     | Z | 5.78 | 67.25 | 16.30 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)   | X | 5.72 | 67.16 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.67 | 66.97 | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 5.68 | 67.00 | 16.20 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)   | X | 5.81 | 67.18 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.76 | 67.00 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.77 | 67.03 | 16.23 |      | 150.0 |         |
| 10554-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 6.07 | 67.41 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.02 | 67.24 | 16.28 |      | 150.0 |         |
|           |                                                     | Z | 6.02 | 67.27 | 16.29 |      | 150.0 |         |
| 10555-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.25 | 67.82 | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.19 | 67.62 | 16.43 |      | 150.0 |         |
|           |                                                     | Z | 6.20 | 67.66 | 16.46 |      | 150.0 |         |
| 10556-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.24 | 67.77 | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.19 | 67.59 | 16.41 |      | 150.0 |         |
|           |                                                     | Z | 6.19 | 67.61 | 16.43 |      | 150.0 |         |
| 10557-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.24 | 67.78 | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 6.18 | 67.59 | 16.43 |      | 150.0 |         |
|           |                                                     | Z | 6.19 | 67.62 | 16.45 |      | 150.0 |         |

|           |                                                                 |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10558-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)             | X | 6.31   | 68.00  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.25   | 67.79  | 16.55 |      | 150.0 |         |
|           |                                                                 | Z | 6.26   | 67.82  | 16.57 |      | 150.0 |         |
| 10560-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)             | X | 6.30   | 67.81  | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.24   | 67.61  | 16.50 |      | 150.0 |         |
|           |                                                                 | Z | 6.26   | 67.66  | 16.52 |      | 150.0 |         |
| 10561-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)             | X | 6.20   | 67.76  | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.15   | 67.55  | 16.51 |      | 150.0 |         |
|           |                                                                 | Z | 6.16   | 67.60  | 16.53 |      | 150.0 |         |
| 10562-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)             | X | 6.39   | 68.33  | 17.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.32   | 68.08  | 16.77 |      | 150.0 |         |
|           |                                                                 | Z | 6.34   | 68.13  | 16.81 |      | 150.0 |         |
| 10563-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)             | X | 6.65   | 68.60  | 17.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.59   | 68.41  | 16.88 |      | 150.0 |         |
|           |                                                                 | Z | 6.58   | 68.40  | 16.88 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 5.14   | 67.24  | 16.77 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.09   | 67.04  | 16.53 |      | 150.0 |         |
|           |                                                                 | Z | 5.10   | 67.08  | 16.57 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.42   | 67.73  | 17.08 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.36   | 67.55  | 16.86 |      | 150.0 |         |
|           |                                                                 | Z | 5.38   | 67.58  | 16.89 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 5.25   | 67.63  | 16.93 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.19   | 67.42  | 16.69 |      | 150.0 |         |
|           |                                                                 | Z | 5.21   | 67.47  | 16.73 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 5.27   | 67.98  | 17.24 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.22   | 67.81  | 17.03 |      | 150.0 |         |
|           |                                                                 | Z | 5.23   | 67.81  | 17.03 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 5.15   | 67.34  | 16.68 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.09   | 67.11  | 16.43 |      | 150.0 |         |
|           |                                                                 | Z | 5.12   | 67.17  | 16.48 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 5.20   | 67.97  | 17.24 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.15   | 67.81  | 17.04 |      | 150.0 |         |
|           |                                                                 | Z | 5.16   | 67.80  | 17.04 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 5.25   | 67.80  | 17.18 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.20   | 67.64  | 16.98 |      | 150.0 |         |
|           |                                                                 | Z | 5.21   | 67.63  | 16.98 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.47   | 67.75  | 17.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.40   | 66.34  | 16.57 |      | 130.0 |         |
|           |                                                                 | Z | 1.42   | 66.69  | 16.76 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.51   | 68.57  | 18.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.43   | 67.03  | 16.96 |      | 130.0 |         |
|           |                                                                 | Z | 1.45   | 67.37  | 17.14 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 100.00 | 149.09 | 40.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.48   | 98.07  | 27.02 |      | 130.0 |         |
|           |                                                                 | Z | 8.77   | 105.39 | 29.04 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 2.10   | 78.38  | 22.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.75   | 74.27  | 20.33 |      | 130.0 |         |
|           |                                                                 | Z | 1.81   | 74.78  | 20.52 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.95 | 67.11 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.91 | 66.91 | 16.63 |      | 130.0 |         |
|           |                                                                 | Z | 4.93 | 66.95 | 16.67 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.98 | 67.26 | 16.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.93 | 67.07 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.95 | 67.11 | 16.73 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 5.23 | 67.61 | 17.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.18 | 67.42 | 16.88 |      | 130.0 |         |
|           |                                                                 | Z | 5.21 | 67.46 | 16.91 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 5.13 | 67.79 | 17.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.07 | 67.60 | 16.98 |      | 130.0 |         |
|           |                                                                 | Z | 5.10 | 67.62 | 17.00 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.92 | 67.26 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 66.98 | 16.35 |      | 130.0 |         |
|           |                                                                 | Z | 4.89 | 67.08 | 16.43 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.96 | 67.18 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.89 | 66.92 | 16.33 |      | 130.0 |         |
|           |                                                                 | Z | 4.93 | 67.01 | 16.41 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 5.04 | 67.92 | 17.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.98 | 67.70 | 16.95 |      | 130.0 |         |
|           |                                                                 | Z | 5.01 | 67.74 | 16.97 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.88 | 67.01 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.81 | 66.72 | 16.14 |      | 130.0 |         |
|           |                                                                 | Z | 4.85 | 66.84 | 16.24 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.95 | 67.11 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.91 | 66.91 | 16.63 |      | 130.0 |         |
|           |                                                                 | Z | 4.93 | 66.95 | 16.67 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.98 | 67.26 | 16.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.93 | 67.07 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.95 | 67.11 | 16.73 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 5.23 | 67.61 | 17.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.18 | 67.42 | 16.88 |      | 130.0 |         |
|           |                                                                 | Z | 5.21 | 67.46 | 16.91 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 5.13 | 67.79 | 17.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.07 | 67.60 | 16.98 |      | 130.0 |         |
|           |                                                                 | Z | 5.10 | 67.62 | 17.00 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.92 | 67.26 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 66.98 | 16.35 |      | 130.0 |         |
|           |                                                                 | Z | 4.89 | 67.08 | 16.43 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.96 | 67.18 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.89 | 66.92 | 16.33 |      | 130.0 |         |
|           |                                                                 | Z | 4.93 | 67.01 | 16.41 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 5.04 | 67.92 | 17.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.98 | 67.70 | 16.95 |      | 130.0 |         |
|           |                                                                 | Z | 5.01 | 67.74 | 16.97 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.88 | 67.01 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.81 | 66.72 | 16.14 |      | 130.0 |         |
|           |                                                                 | Z | 4.85 | 66.84 | 16.24 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 5.10 | 67.15 | 16.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.06 | 66.97 | 16.72 |      | 130.0 |         |
|           |                                                       | Z | 5.07 | 67.00 | 16.75 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 5.29 | 67.50 | 17.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.24 | 67.32 | 16.84 |      | 130.0 |         |
|           |                                                       | Z | 5.26 | 67.35 | 16.87 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 5.23 | 67.49 | 16.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.17 | 67.29 | 16.76 |      | 130.0 |         |
|           |                                                       | Z | 5.20 | 67.34 | 16.80 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 5.27 | 67.61 | 17.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.22 | 67.43 | 16.89 |      | 130.0 |         |
|           |                                                       | Z | 5.25 | 67.46 | 16.92 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 5.26 | 67.62 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.20 | 67.41 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 5.23 | 67.46 | 16.84 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 5.19 | 67.61 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.14 | 67.40 | 16.80 |      | 130.0 |         |
|           |                                                       | Z | 5.17 | 67.44 | 16.84 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 5.15 | 67.57 | 16.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.09 | 67.35 | 16.72 |      | 130.0 |         |
|           |                                                       | Z | 5.12 | 67.41 | 16.76 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 5.13 | 67.83 | 17.22 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.07 | 67.62 | 16.99 |      | 130.0 |         |
|           |                                                       | Z | 5.10 | 67.66 | 17.02 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.77 | 67.78 | 17.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.72 | 67.60 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 5.74 | 67.64 | 16.94 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 6.05 | 68.62 | 17.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.98 | 68.34 | 17.26 |      | 130.0 |         |
|           |                                                       | Z | 6.00 | 68.41 | 17.31 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.86 | 68.09 | 17.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.80 | 67.88 | 17.04 |      | 130.0 |         |
|           |                                                       | Z | 5.82 | 67.93 | 17.07 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.98 | 68.19 | 17.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.90 | 67.93 | 16.99 |      | 130.0 |         |
|           |                                                       | Z | 5.94 | 68.03 | 17.05 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 6.09 | 68.56 | 17.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 6.02 | 68.33 | 17.31 |      | 130.0 |         |
|           |                                                       | Z | 6.05 | 68.40 | 17.35 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.79 | 67.78 | 17.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.74 | 67.59 | 16.93 |      | 130.0 |         |
|           |                                                       | Z | 5.76 | 67.64 | 16.97 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.91 | 68.09 | 17.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.85 | 67.88 | 17.08 |      | 130.0 |         |
|           |                                                       | Z | 5.87 | 67.94 | 17.12 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.67 | 67.56 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.62 | 67.36 | 16.69 |      | 130.0 |         |
|           |                                                       | Z | 5.63 | 67.40 | 16.73 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.93 | 66.44 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.88 | 66.25 | 16.33 |      | 130.0 |         |
|           |                                                   | Z | 4.90 | 66.28 | 16.35 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 5.16 | 66.88 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.11 | 66.69 | 16.49 |      | 130.0 |         |
|           |                                                   | Z | 5.13 | 66.71 | 16.51 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 5.05 | 66.80 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.99 | 66.58 | 16.36 |      | 130.0 |         |
|           |                                                   | Z | 5.02 | 66.62 | 16.39 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 5.11 | 66.94 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.05 | 66.74 | 16.51 |      | 130.0 |         |
|           |                                                   | Z | 5.07 | 66.77 | 16.54 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 5.04 | 66.82 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.98 | 66.59 | 16.39 |      | 130.0 |         |
|           |                                                   | Z | 5.01 | 66.64 | 16.42 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 5.06 | 66.96 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.99 | 66.72 | 16.41 |      | 130.0 |         |
|           |                                                   | Z | 5.02 | 66.77 | 16.45 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 5.08 | 66.91 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.01 | 66.66 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 5.04 | 66.72 | 16.37 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 5.00 | 67.09 | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.94 | 66.86 | 16.56 |      | 130.0 |         |
|           |                                                   | Z | 4.96 | 66.90 | 16.59 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 5.04 | 66.62 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.98 | 66.38 | 16.15 |      | 130.0 |         |
|           |                                                   | Z | 5.01 | 66.45 | 16.20 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.59 | 67.05 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.54 | 66.86 | 16.53 |      | 130.0 |         |
|           |                                                   | Z | 5.56 | 66.89 | 16.55 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.66 | 67.16 | 16.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.60 | 66.97 | 16.55 |      | 130.0 |         |
|           |                                                   | Z | 5.62 | 67.01 | 16.57 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.55 | 67.23 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.50 | 67.04 | 16.61 |      | 130.0 |         |
|           |                                                   | Z | 5.51 | 67.07 | 16.62 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.57 | 67.04 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.51 | 66.84 | 16.44 |      | 130.0 |         |
|           |                                                   | Z | 5.53 | 66.88 | 16.47 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.71 | 67.21 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.65 | 66.99 | 16.56 |      | 130.0 |         |
|           |                                                   | Z | 5.67 | 67.05 | 16.60 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.67 | 67.21 | 16.90 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.61 | 67.05 | 16.70 |      | 130.0 |         |
|           |                                                   | Z | 5.63 | 67.07 | 16.71 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.66 | 67.33 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.61 | 67.14 | 16.74 |      | 130.0 |         |
|           |                                                   | Z | 5.63 | 67.17 | 16.76 |      | 130.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)   | X | 5.58 | 67.03 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.51 | 66.79 | 16.46 |      | 130.0 |         |
|           |                                                     | Z | 5.54 | 66.88 | 16.51 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)   | X | 5.74 | 67.07 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.68 | 66.89 | 16.57 |      | 130.0 |         |
|           |                                                     | Z | 5.70 | 66.92 | 16.59 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)   | X | 6.12 | 68.00 | 17.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.07 | 67.85 | 17.09 |      | 130.0 |         |
|           |                                                     | Z | 6.06 | 67.78 | 17.06 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)   | X | 5.83 | 67.05 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.78 | 66.88 | 16.46 |      | 130.0 |         |
|           |                                                     | Z | 5.79 | 66.91 | 16.47 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)   | X | 6.10 | 67.59 | 16.86 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.05 | 67.42 | 16.67 |      | 130.0 |         |
|           |                                                     | Z | 6.05 | 67.42 | 16.67 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)   | X | 5.92 | 67.28 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.86 | 67.08 | 16.45 |      | 130.0 |         |
|           |                                                     | Z | 5.88 | 67.13 | 16.48 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)   | X | 6.03 | 67.42 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.97 | 67.19 | 16.49 |      | 130.0 |         |
|           |                                                     | Z | 5.99 | 67.27 | 16.54 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)   | X | 6.68 | 69.49 | 17.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.56 | 69.10 | 17.44 |      | 130.0 |         |
|           |                                                     | Z | 6.58 | 69.15 | 17.48 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)   | X | 6.50 | 69.03 | 17.69 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.41 | 68.76 | 17.46 |      | 130.0 |         |
|           |                                                     | Z | 6.44 | 68.80 | 17.47 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)   | X | 6.08 | 67.69 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.03 | 67.54 | 16.87 |      | 130.0 |         |
|           |                                                     | Z | 6.05 | 67.55 | 16.87 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)   | X | 6.06 | 67.65 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.99 | 67.42 | 16.64 |      | 130.0 |         |
|           |                                                     | Z | 6.01 | 67.48 | 16.68 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)   | X | 6.02 | 67.58 | 16.89 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.96 | 67.38 | 16.68 |      | 130.0 |         |
|           |                                                     | Z | 5.98 | 67.43 | 16.71 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)   | X | 5.89 | 66.92 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.83 | 66.68 | 16.08 |      | 130.0 |         |
|           |                                                     | Z | 5.86 | 66.78 | 16.14 |      | 130.0 |         |
| 10636-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.23 | 67.45 | 16.75 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.19 | 67.29 | 16.56 |      | 130.0 |         |
|           |                                                     | Z | 6.20 | 67.31 | 16.57 |      | 130.0 |         |
| 10637-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.44 | 67.93 | 16.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.38 | 67.73 | 16.75 |      | 130.0 |         |
|           |                                                     | Z | 6.40 | 67.78 | 16.78 |      | 130.0 |         |
| 10638-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.41 | 67.82 | 16.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.36 | 67.64 | 16.69 |      | 130.0 |         |
|           |                                                     | Z | 6.37 | 67.67 | 16.71 |      | 130.0 |         |

|           |                                                        |   |       |        |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10639-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)    | X | 6.43  | 67.88  | 16.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.38  | 67.70  | 16.77 |      | 130.0 |         |
|           |                                                        | Z | 6.39  | 67.74  | 16.79 |      | 130.0 |         |
| 10640-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)    | X | 6.48  | 68.03  | 16.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.42  | 67.80  | 16.76 |      | 130.0 |         |
|           |                                                        | Z | 6.43  | 67.86  | 16.80 |      | 130.0 |         |
| 10641-AAA | IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)    | X | 6.45  | 67.69  | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.39  | 67.49  | 16.62 |      | 130.0 |         |
|           |                                                        | Z | 6.41  | 67.55  | 16.66 |      | 130.0 |         |
| 10642-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)    | X | 6.53  | 68.02  | 17.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.47  | 67.85  | 16.96 |      | 130.0 |         |
|           |                                                        | Z | 6.49  | 67.89  | 16.98 |      | 130.0 |         |
| 10643-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)    | X | 6.36  | 67.74  | 16.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.30  | 67.53  | 16.71 |      | 130.0 |         |
|           |                                                        | Z | 6.31  | 67.59  | 16.75 |      | 130.0 |         |
| 10644-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)    | X | 6.64  | 68.58  | 17.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.55  | 68.29  | 17.12 |      | 130.0 |         |
|           |                                                        | Z | 6.58  | 68.38  | 17.17 |      | 130.0 |         |
| 10645-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)    | X | 6.88  | 68.81  | 17.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.82  | 68.61  | 17.21 |      | 130.0 |         |
|           |                                                        | Z | 6.82  | 68.61  | 17.22 |      | 130.0 |         |
| 10646-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 25.26 | 106.71 | 35.56 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 24.21 | 105.83 | 35.01 |      | 60.0  |         |
|           |                                                        | Z | 22.77 | 103.47 | 34.30 |      | 60.0  |         |
| 10647-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 26.48 | 108.55 | 36.25 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 24.67 | 107.00 | 35.49 |      | 60.0  |         |
|           |                                                        | Z | 23.62 | 105.03 | 34.91 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 1.07  | 68.58  | 14.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.88  | 65.28  | 12.75 |      | 150.0 |         |
|           |                                                        | Z | 0.91  | 65.79  | 13.10 |      | 150.0 |         |

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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 The Swiss Accreditation Service is one of the signatories to the EA  
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **EX3-7308\_Aug17**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7308**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6**  
**Calibration procedure for dosimetric E-field probes**

Calibration date: **August 16, 2017**

PN ✓  
 8/27/17

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature ( $22 \pm 3$ )°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-17 (No. 217-02521/02522)   | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-17 (No. 217-02521)         | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-17 (No. 217-02525)         | Apr-18                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 07-Apr-17 (No. 217-02528)         | Apr-18                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-16) | In house check: Jun-18 |
| Network Analyzer HP 8753E  | SN: US37390585   | 18-Oct-01 (in house check Oct-16) | In house check: Oct-17 |

|                                                                                                                 |                              |                                          |                         |
|-----------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------|-------------------------|
| Calibrated by:                                                                                                  | Name<br><b>Leif Klysner</b>  | Function<br><b>Laboratory Technician</b> | Signature<br>           |
| Approved by:                                                                                                    | Name<br><b>Katja Pokovic</b> | Function<br><b>Technical Manager</b>     | Signature<br>           |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                              |                                          | Issued: August 16, 2017 |



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

## Glossary:

|                          |                                                                                                                                                         |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| TSL                      | tissue simulating liquid                                                                                                                                |
| NORM <sub>x,y,z</sub>    | sensitivity in free space                                                                                                                               |
| ConvF                    | sensitivity in TSL / NORM <sub>x,y,z</sub>                                                                                                              |
| DCP                      | diode compression point                                                                                                                                 |
| CF                       | crest factor (1/duty_cycle) of the RF signal                                                                                                            |
| A, B, C, D               | modulation dependent linearization parameters                                                                                                           |
| Polarization $\varphi$   | $\varphi$ rotation around probe axis                                                                                                                    |
| Polarization $\vartheta$ | $\vartheta$ rotation around an axis that is in the plane normal to probe axis (at measurement center),<br>i.e., $\vartheta = 0$ is normal to probe axis |
| Connector Angle          | information used in DASY system to align probe sensor X to the robot coordinate system                                                                  |

## Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

## Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\vartheta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub>** = NORM<sub>x,y,z</sub> \* frequency\_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).

# Probe EX3DV4

## SN:7308

Manufactured: March 11, 2014  
Calibrated: August 16, 2017

Calibrated for DASY/EASY Systems  
(Note: non-compatible with DASY2 system!)

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.49     | 0.60     | 0.44     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 97.0     | 91.7     | 98.5     |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                          | 1.0 | 0.00    | 134.5    | $\pm 3.3 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 130.8    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 149.9    |                           |

Note: For details on UID parameters see Appendix.

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$\text{V}^{-1}$ | T1<br>$\text{ms}\cdot\text{V}^{-2}$ | T2<br>$\text{ms}\cdot\text{V}^{-1}$ | T3<br>ms | T4<br>$\text{V}^{-2}$ | T5<br>$\text{V}^{-1}$ | T6    |
|---|----------|----------|-----------------------------|-------------------------------------|-------------------------------------|----------|-----------------------|-----------------------|-------|
| X | 46.65    | 351.1    | 36.16                       | 14.68                               | 0.000                               | 5.088    | 0.834                 | 0.399                 | 1.005 |
| Y | 52.88    | 402.1    | 36.74                       | 19.55                               | 0.309                               | 5.100    | 0.477                 | 0.605                 | 1.007 |
| Z | 36.70    | 273.3    | 35.48                       | 9.322                               | 0.000                               | 5.034    | 0.373                 | 0.314                 | 1.002 |

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the  $E^2$ -field uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 5250                 | 35.9                               | 4.71                            | 5.25    | 5.25    | 5.25    | 0.35               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.83    | 4.83    | 4.83    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 5.11    | 5.11    | 5.11    | 0.40               | 1.80                    | ± 13.1 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 10.39   | 10.39   | 10.39   | 0.54               | 0.85                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 10.21   | 10.21   | 10.21   | 0.47               | 0.84                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.24    | 8.24    | 8.24    | 0.41               | 0.84                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.96    | 7.96    | 7.96    | 0.37               | 0.80                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.77    | 7.77    | 7.77    | 0.39               | 0.86                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.66    | 7.66    | 7.66    | 0.35               | 0.85                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.46    | 7.46    | 7.46    | 0.31               | 0.95                    | ± 12.0 %  |
| 5250                 | 48.9                               | 5.36                            | 4.84    | 4.84    | 4.84    | 0.35               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.23    | 4.23    | 4.23    | 0.40               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.50    | 4.50    | 4.50    | 0.40               | 1.90                    | ± 13.1 %  |

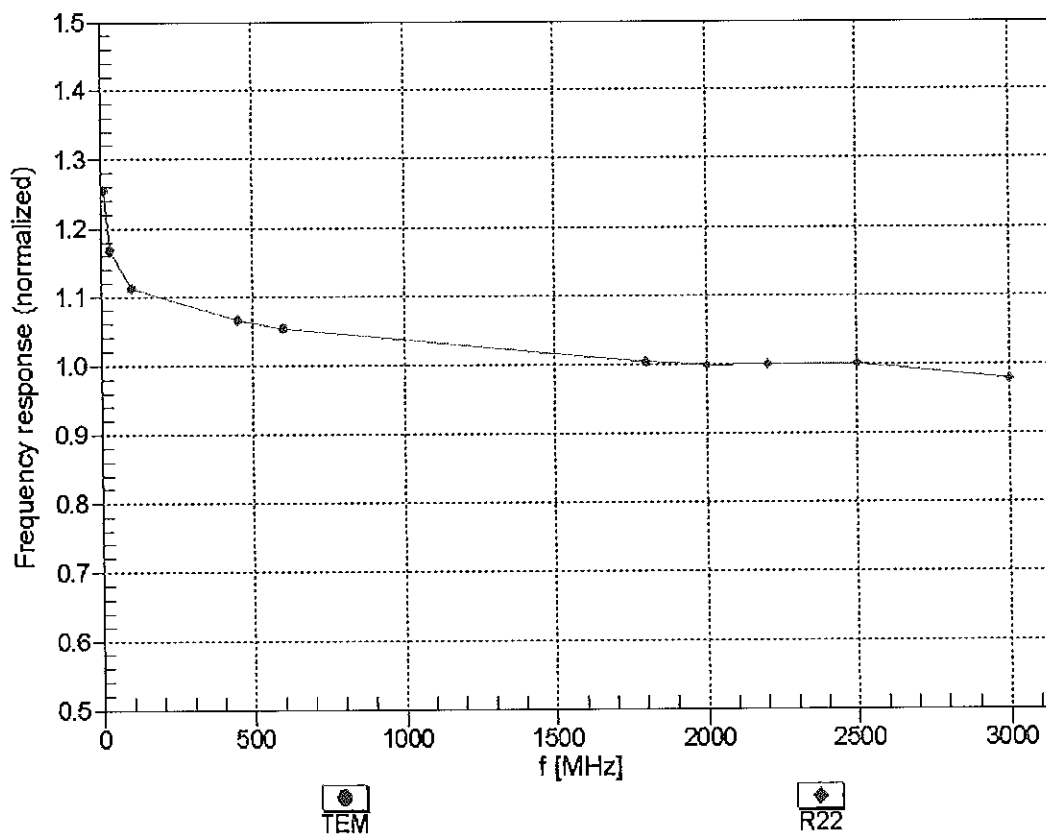
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

## Frequency Response of E-Field

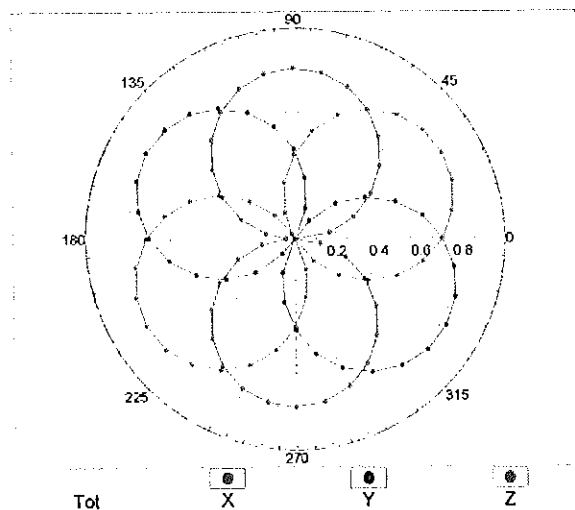
(TEM-Cell:ifi110 EXX, Waveguide: R22)



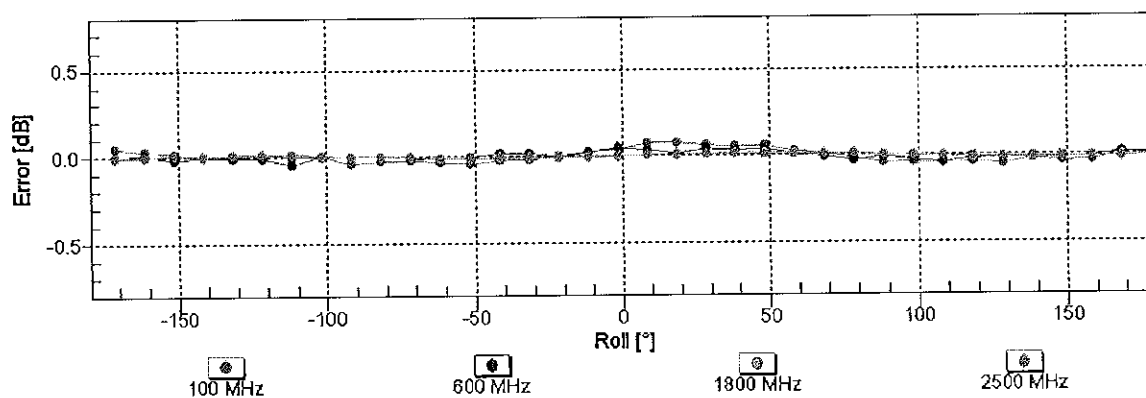
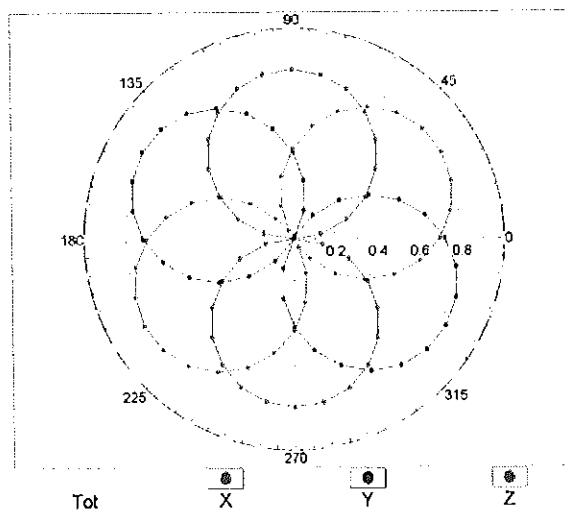
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

## Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$

f=600 MHz,TEM

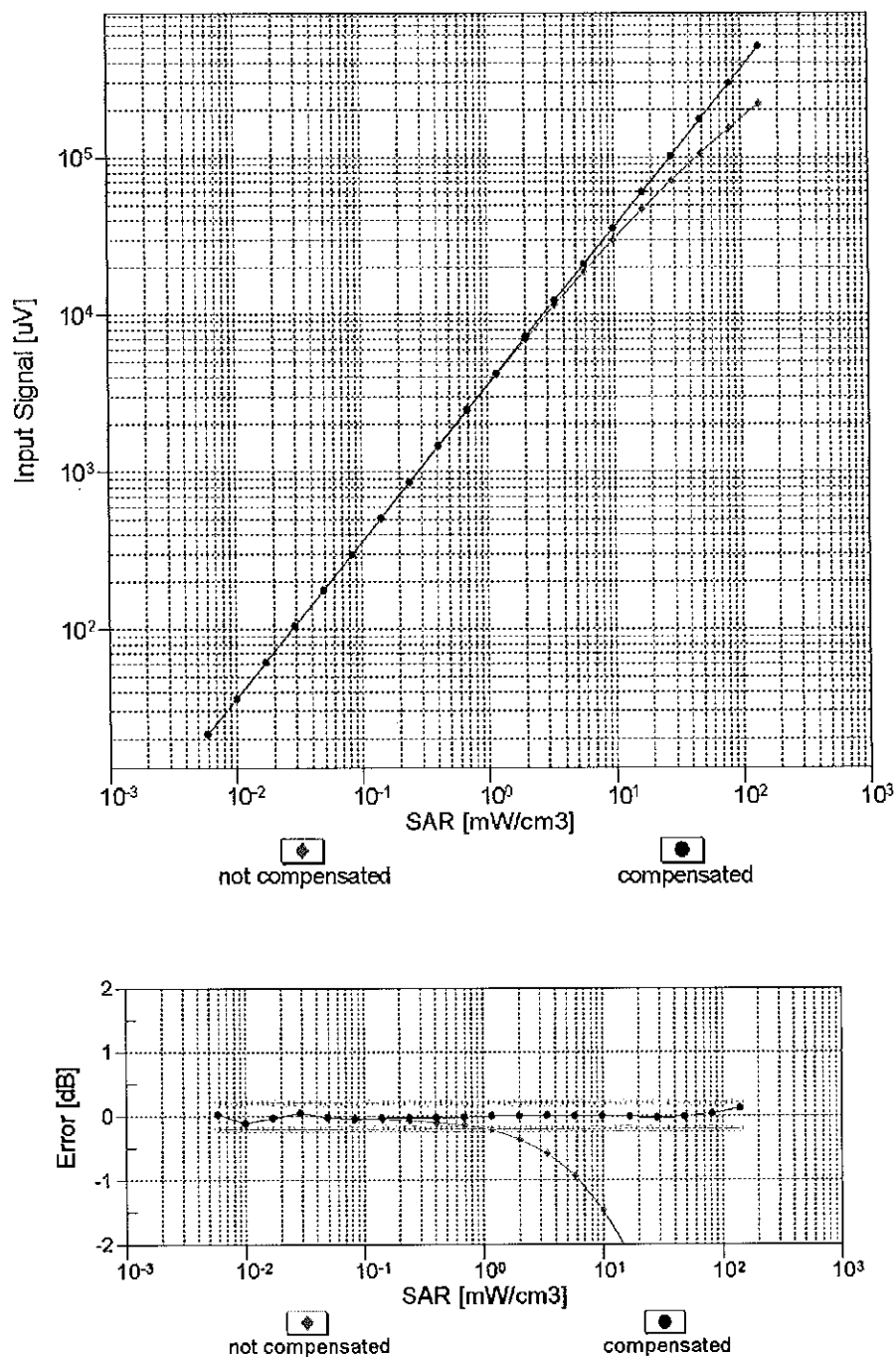


f=1800 MHz,R22



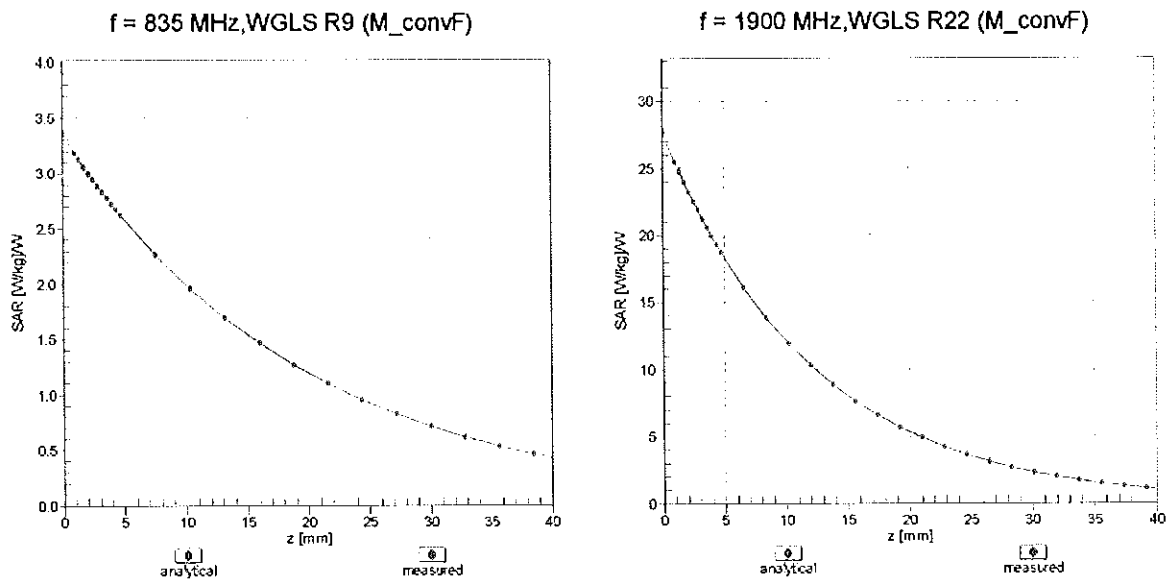
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

# Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900 \text{ MHz}$ )



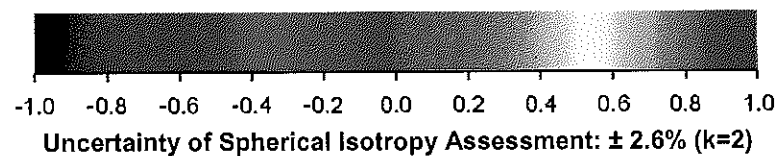
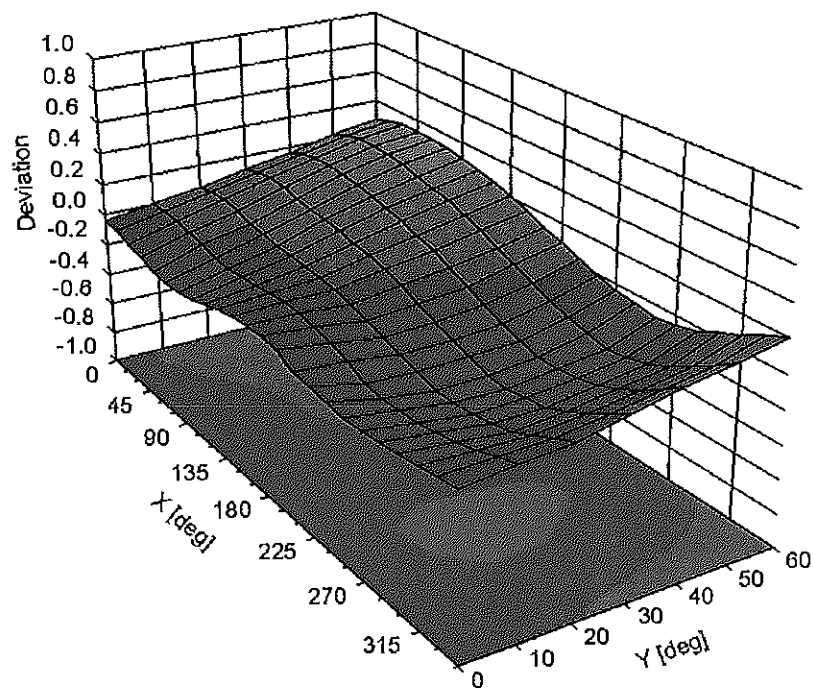
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

Error ( $\phi$ ,  $\theta$ ),  $f = 900 \text{ MHz}$



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 108.4      |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Appendix: Modulation Calibration Parameters**

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\sqrt{\mu V}$ | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|------------------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00                   | 1.00  | 0.00    | 134.5    | $\pm 3.3 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 130.8    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 149.9    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.82    | 69.38                  | 11.47 | 10.00   | 20.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 8.85    | 81.60                  | 16.75 |         | 20.0     |                                  |
|               |                                               | Z | 1.57    | 63.55                  | 8.34  |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.10    | 68.34                  | 15.94 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.03    | 66.61                  | 14.91 |         | 150.0    |                                  |
|               |                                               | Z | 1.05    | 68.21                  | 15.74 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.19    | 64.20                  | 15.65 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.20    | 63.83                  | 15.29 |         | 150.0    |                                  |
|               |                                               | Z | 1.16    | 63.91                  | 15.33 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.89    | 66.77                  | 17.26 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.97    | 66.66                  | 17.21 |         | 150.0    |                                  |
|               |                                               | Z | 4.71    | 66.76                  | 17.06 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 100.00  | 115.21                 | 27.27 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 118.99                 | 29.62 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 108.16                 | 23.75 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 100.00  | 114.49                 | 26.98 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 118.59                 | 29.46 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 107.44                 | 23.48 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 117.36                 | 27.41 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 118.20                 | 28.43 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 109.72                 | 23.49 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 9.43    | 102.43                 | 43.37 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.76    | 81.81                  | 33.21 |         | 50.0     |                                  |
|               |                                               | Z | 6.64    | 89.92                  | 37.39 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 12.23   | 103.58                 | 38.33 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 13.89   | 103.56                 | 37.54 |         | 60.0     |                                  |
|               |                                               | Z | 6.87    | 89.09                  | 32.73 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 121.12                 | 28.38 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 119.35                 | 28.26 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 113.58                 | 24.47 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 126.40                 | 29.97 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 121.68                 | 28.61 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 119.83                 | 26.46 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 6.36    | 85.88                  | 30.18 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 7.77    | 88.44                  | 30.64 |         | 80.0     |                                  |
|               |                                               | Z | 4.37    | 77.58                  | 26.51 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 116.71                 | 26.74 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 116.86                 | 27.45 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 108.46                 | 22.53 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 130.68                 | 30.26 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 122.76                 | 27.68 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 121.33                 | 25.72 |         | 100.0    |                                  |

|           |                                                     |   |         |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|---------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00  | 146.47 | 35.43 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00  | 130.05 | 29.64 |       | 100.0 |         |
|           |                                                     | Z | 100.00  | 142.38 | 32.95 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 100.00  | 133.81 | 36.67 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 100.00  | 132.56 | 36.57 |       | 70.0  |         |
|           |                                                     | Z | 18.79   | 102.95 | 27.19 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 7.76    | 92.37  | 23.91 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 6.00    | 87.65  | 22.68 |       | 100.0 |         |
|           |                                                     | Z | 3.22    | 78.87  | 18.00 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 3.37    | 81.04  | 19.87 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.89    | 77.85  | 18.94 |       | 100.0 |         |
|           |                                                     | Z | 2.06    | 74.00  | 15.93 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 100.00  | 134.35 | 36.91 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 100.00  | 133.01 | 36.79 |       | 70.0  |         |
|           |                                                     | Z | 38.41   | 113.99 | 30.14 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 6.72    | 90.40  | 23.29 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 5.52    | 86.51  | 22.28 |       | 100.0 |         |
|           |                                                     | Z | 2.77    | 77.09  | 17.35 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 3.40    | 81.53  | 20.18 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.93    | 78.34  | 19.24 |       | 100.0 |         |
|           |                                                     | Z | 2.07    | 74.35  | 16.21 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 2.05    | 73.74  | 16.48 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.78    | 70.97  | 15.59 |       | 150.0 |         |
|           |                                                     | Z | 1.68    | 71.87  | 14.68 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00  | 111.92 | 25.18 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00  | 114.62 | 26.97 |       | 50.0  |         |
|           |                                                     | Z | 100.00  | 105.38 | 21.87 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00    | 97.13  | 0.41  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00    | 93.19  | 1.28  |       | 150.0 |         |
|           |                                                     | Z | 0.01    | 94.96  | 0.54  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 100.00  | 111.98 | 26.96 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 100.00  | 121.05 | 31.60 |       | 25.0  |         |
|           |                                                     | Z | 34.07   | 91.91  | 20.28 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 1284.72 | 142.21 | 32.21 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 100.00  | 117.51 | 29.18 |       | 40.0  |         |
|           |                                                     | Z | 145.96  | 109.32 | 23.74 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 100.00  | 128.20 | 35.15 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00  | 128.83 | 35.96 |       | 50.0  |         |
|           |                                                     | Z | 100.00  | 122.10 | 31.77 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 4.71    | 78.88  | 26.31 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 5.67    | 81.33  | 26.92 |       | 100.0 |         |
|           |                                                     | Z | 3.54    | 73.15  | 23.60 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.24    | 65.47  | 16.42 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.27    | 65.23  | 16.10 |       | 110.0 |         |
|           |                                                     | Z | 1.17    | 64.77  | 15.84 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00  | 144.38 | 38.50 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00  | 138.88 | 36.40 |       | 110.0 |         |
|           |                                                     | Z | 13.09   | 112.30 | 30.84 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 4.05 | 88.33 | 25.97 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 4.75 | 88.86 | 25.68 |      | 110.0 |         |
|           |                                                | Z | 2.16 | 77.73 | 21.68 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.69 | 66.76 | 16.65 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.76 | 66.60 | 16.58 |      | 100.0 |         |
|           |                                                | Z | 4.53 | 66.78 | 16.51 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.71 | 66.86 | 16.76 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.78 | 66.72 | 16.70 |      | 100.0 |         |
|           |                                                | Z | 4.54 | 66.86 | 16.60 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.99 | 67.12 | 16.99 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.09 | 67.02 | 16.95 |      | 100.0 |         |
|           |                                                | Z | 4.78 | 67.06 | 16.80 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.86 | 67.02 | 17.11 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.96 | 66.95 | 17.08 |      | 100.0 |         |
|           |                                                | Z | 4.65 | 66.90 | 16.87 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.88 | 67.05 | 17.29 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.99 | 66.99 | 17.27 |      | 100.0 |         |
|           |                                                | Z | 4.65 | 66.88 | 17.02 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.16 | 67.22 | 17.75 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.27 | 67.12 | 17.71 |      | 100.0 |         |
|           |                                                | Z | 4.93 | 67.13 | 17.49 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.20 | 67.26 | 17.98 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.34 | 67.28 | 18.00 |      | 100.0 |         |
|           |                                                | Z | 4.95 | 67.02 | 17.64 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.28 | 67.26 | 18.18 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.42 | 67.23 | 18.17 |      | 100.0 |         |
|           |                                                | Z | 5.02 | 67.05 | 17.83 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.98 | 66.86 | 17.58 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.07 | 66.77 | 17.55 |      | 100.0 |         |
|           |                                                | Z | 4.79 | 66.80 | 17.35 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.95 | 67.19 | 17.81 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.06 | 67.16 | 17.80 |      | 100.0 |         |
|           |                                                | Z | 4.74 | 67.03 | 17.53 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.00 | 67.34 | 18.16 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.12 | 67.33 | 18.16 |      | 100.0 |         |
|           |                                                | Z | 4.79 | 67.17 | 17.85 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.97 | 67.20 | 18.31 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.10 | 67.22 | 18.33 |      | 100.0 |         |
|           |                                                | Z | 4.78 | 67.07 | 17.99 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.00 | 67.30 | 18.63 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.15 | 67.40 | 18.70 |      | 90.0  |         |
|           |                                                | Z | 4.78 | 67.05 | 18.23 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.00 | 67.05 | 18.74 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.14 | 67.12 | 18.78 |      | 90.0  |         |
|           |                                                | Z | 4.81 | 66.90 | 18.39 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.02 | 67.11 | 18.84 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.16 | 67.16 | 18.87 |      | 90.0  |         |
|           |                                                | Z | 4.84 | 66.97 | 18.50 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.91   | 67.10  | 13.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.87   | 65.55  | 12.69 |      | 150.0 |         |
|           |                                                     | Z | 0.76   | 65.80  | 11.60 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.67   | 60.00  | 4.34  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.83   | 60.00  | 4.98  |      | 80.0  |         |
|           |                                                     | Z | 1.32   | 62.68  | 4.53  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 117.37 | 27.43 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 118.23 | 28.46 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 109.70 | 23.50 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.89   | 68.18  | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.82   | 67.06  | 15.47 |      | 150.0 |         |
|           |                                                     | Z | 1.87   | 68.73  | 15.97 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.85   | 68.15  | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.78   | 67.01  | 15.43 |      | 150.0 |         |
|           |                                                     | Z | 1.83   | 68.68  | 15.95 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 12.41  | 103.93 | 38.44 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 14.05  | 103.81 | 37.62 |      | 60.0  |         |
|           |                                                     | Z | 6.94   | 89.30  | 32.81 |      | 60.0  |         |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.20   | 70.68  | 16.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.15   | 69.96  | 16.53 |      | 150.0 |         |
|           |                                                     | Z | 3.05   | 70.44  | 16.91 |      | 150.0 |         |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.27   | 67.67  | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.29   | 67.34  | 15.87 |      | 150.0 |         |
|           |                                                     | Z | 3.15   | 67.56  | 16.02 |      | 150.0 |         |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.37   | 67.61  | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.39   | 67.30  | 15.96 |      | 150.0 |         |
|           |                                                     | Z | 3.26   | 67.54  | 16.10 |      | 150.0 |         |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 6.70   | 77.76  | 21.71 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 7.25   | 78.01  | 21.66 |      | 65.0  |         |
|           |                                                     | Z | 5.31   | 74.49  | 20.24 |      | 65.0  |         |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 6.39   | 74.88  | 21.30 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 7.01   | 75.63  | 21.49 |      | 65.0  |         |
|           |                                                     | Z | 5.41   | 72.53  | 20.08 |      | 65.0  |         |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 5.93   | 73.22  | 20.87 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.37   | 73.62  | 20.93 |      | 65.0  |         |
|           |                                                     | Z | 4.98   | 70.66  | 19.52 |      | 65.0  |         |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.79   | 69.92  | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.76   | 69.17  | 16.35 |      | 150.0 |         |
|           |                                                     | Z | 2.63   | 69.76  | 16.75 |      | 150.0 |         |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.93   | 67.55  | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.94   | 67.14  | 15.76 |      | 150.0 |         |
|           |                                                     | Z | 2.80   | 67.54  | 15.90 |      | 150.0 |         |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.27   | 69.10  | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.25   | 68.23  | 15.96 |      | 150.0 |         |
|           |                                                     | Z | 2.13   | 69.06  | 16.32 |      | 150.0 |         |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.65   | 68.45  | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.64   | 67.76  | 16.00 |      | 150.0 |         |
|           |                                                     | Z | 2.55   | 68.78  | 16.20 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.05 | 67.53 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.07 | 67.13 | 15.82 |      | 150.0 |         |
|           |                                                | Z | 2.92 | 67.58 | 15.97 |      | 150.0 |         |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.80 | 68.56 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.80 | 67.90 | 16.13 |      | 150.0 |         |
|           |                                                | Z | 2.69 | 68.93 | 16.32 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.15 | 67.26 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.19 | 67.08 | 16.42 |      | 150.0 |         |
|           |                                                | Z | 4.99 | 67.20 | 16.47 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.43 | 67.37 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.52 | 67.34 | 16.56 |      | 150.0 |         |
|           |                                                | Z | 5.24 | 67.27 | 16.51 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.24 | 67.44 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.30 | 67.32 | 16.46 |      | 150.0 |         |
|           |                                                | Z | 5.08 | 67.39 | 16.50 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.11 | 67.11 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.16 | 66.99 | 16.39 |      | 150.0 |         |
|           |                                                | Z | 4.99 | 67.15 | 16.47 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.51 | 67.58 | 16.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.61 | 67.54 | 16.67 |      | 150.0 |         |
|           |                                                | Z | 5.31 | 67.44 | 16.61 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.22 | 67.40 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.27 | 67.25 | 16.44 |      | 150.0 |         |
|           |                                                | Z | 5.07 | 67.38 | 16.51 |      | 150.0 |         |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.41 | 67.63 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.43 | 67.31 | 15.88 |      | 150.0 |         |
|           |                                                | Z | 3.28 | 67.57 | 16.02 |      | 150.0 |         |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.53 | 67.71 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.55 | 67.40 | 16.05 |      | 150.0 |         |
|           |                                                | Z | 3.40 | 67.71 | 16.20 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.05 | 69.21 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.02 | 68.14 | 15.65 |      | 150.0 |         |
|           |                                                | Z | 1.90 | 69.18 | 15.79 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.53 | 69.32 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.50 | 68.40 | 15.76 |      | 150.0 |         |
|           |                                                | Z | 2.39 | 69.52 | 15.59 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.28 | 66.94 | 14.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.31 | 66.41 | 14.31 |      | 150.0 |         |
|           |                                                | Z | 2.06 | 66.49 | 13.57 |      | 150.0 |         |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.26 | 65.57 | 12.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.33 | 65.51 | 12.47 |      | 150.0 |         |
|           |                                                | Z | 0.90 | 62.72 | 9.31  |      | 150.0 |         |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 1.87 | 65.71 | 11.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.34 | 67.84 | 13.03 |      | 150.0 |         |
|           |                                                | Z | 1.05 | 60.97 | 7.27  |      | 150.0 |         |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 2.17 | 67.47 | 12.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.79 | 70.16 | 14.23 |      | 150.0 |         |
|           |                                                | Z | 1.11 | 61.38 | 7.60  |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.93 | 67.61 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.95 | 67.20 | 15.81 |      | 150.0 |         |
|           |                                            | Z | 2.81 | 67.60 | 15.95 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.06 | 67.58 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.08 | 67.18 | 15.86 |      | 150.0 |         |
|           |                                            | Z | 2.93 | 67.64 | 16.01 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 7.47 | 81.50 | 23.31 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.13 | 81.64 | 23.19 |      | 65.0  |         |
|           |                                            | Z | 5.82 | 78.02 | 21.74 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 5.96 | 75.09 | 21.13 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.59 | 75.82 | 21.34 |      | 65.0  |         |
|           |                                            | Z | 4.95 | 72.53 | 19.69 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 6.33 | 76.00 | 21.87 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.98 | 76.72 | 22.08 |      | 65.0  |         |
|           |                                            | Z | 5.31 | 73.57 | 20.52 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.32 | 69.50 | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.30 | 68.63 | 16.21 |      | 150.0 |         |
|           |                                            | Z | 2.17 | 69.43 | 16.55 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.65 | 68.47 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.64 | 67.77 | 16.01 |      | 150.0 |         |
|           |                                            | Z | 2.55 | 68.82 | 16.23 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.90 | 69.38 | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.87 | 68.22 | 15.49 |      | 150.0 |         |
|           |                                            | Z | 1.73 | 69.10 | 15.35 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.13 | 67.61 | 14.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.14 | 66.94 | 14.37 |      | 150.0 |         |
|           |                                            | Z | 1.88 | 66.88 | 13.39 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.80 | 68.62 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.80 | 67.95 | 16.18 |      | 150.0 |         |
|           |                                            | Z | 2.70 | 69.02 | 16.37 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.24 | 68.05 | 14.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.25 | 67.38 | 14.65 |      | 150.0 |         |
|           |                                            | Z | 1.97 | 67.26 | 13.62 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.79 | 68.96 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 68.29 | 16.16 |      | 150.0 |         |
|           |                                            | Z | 2.67 | 69.03 | 16.52 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.95 | 67.54 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.97 | 67.10 | 15.79 |      | 150.0 |         |
|           |                                            | Z | 2.82 | 67.63 | 15.91 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.06 | 67.69 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.08 | 67.22 | 15.89 |      | 150.0 |         |
|           |                                            | Z | 2.94 | 67.84 | 16.05 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.60 | 69.71 | 19.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.76 | 69.53 | 19.10 |      | 150.0 |         |
|           |                                            | Z | 3.14 | 68.43 | 18.52 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 4.49 | 72.92 | 19.79 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.71 | 72.48 | 19.58 |      | 150.0 |         |
|           |                                            | Z | 3.64 | 70.88 | 18.81 |      | 150.0 |         |

|           |                                            |   |       |        |       |      |       |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.99  | 75.19  | 21.10 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.19  | 74.57  | 20.82 |      | 150.0 |         |
|           |                                            | Z | 4.03  | 73.14  | 20.19 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.02  | 69.31  | 19.06 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.27  | 69.70  | 19.15 |      | 150.0 |         |
|           |                                            | Z | 2.51  | 66.78  | 17.76 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 4.24  | 75.66  | 21.52 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.60  | 75.59  | 21.37 |      | 150.0 |         |
|           |                                            | Z | 3.08  | 71.28  | 19.66 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 3.48  | 71.52  | 18.79 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.80  | 71.54  | 18.73 |      | 150.0 |         |
|           |                                            | Z | 2.62  | 68.04  | 17.18 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 9.86  | 97.03  | 31.31 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 11.94 | 97.60  | 31.03 |      | 65.0  |         |
|           |                                            | Z | 3.49  | 77.54  | 23.86 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 35.90 | 116.24 | 34.55 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 33.36 | 111.72 | 33.12 |      | 65.0  |         |
|           |                                            | Z | 6.56  | 87.15  | 25.45 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 21.48 | 105.16 | 30.85 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 20.65 | 101.59 | 29.68 |      | 65.0  |         |
|           |                                            | Z | 4.70  | 80.63  | 22.56 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.98  | 69.02  | 18.83 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.23  | 69.39  | 18.90 |      | 150.0 |         |
|           |                                            | Z | 2.49  | 66.55  | 17.55 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 4.24  | 75.68  | 21.53 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.61  | 75.61  | 21.38 |      | 150.0 |         |
|           |                                            | Z | 3.09  | 71.30  | 19.67 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.01  | 69.16  | 18.92 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.26  | 69.54  | 19.00 |      | 150.0 |         |
|           |                                            | Z | 2.50  | 66.65  | 17.62 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 4.21  | 75.48  | 21.42 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.56  | 75.38  | 21.26 |      | 150.0 |         |
|           |                                            | Z | 3.07  | 71.19  | 19.60 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 3.83  | 73.49  | 20.03 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.16  | 73.42  | 19.91 |      | 150.0 |         |
|           |                                            | Z | 2.83  | 69.59  | 18.31 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 3.47  | 71.46  | 18.75 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.79  | 71.47  | 18.68 |      | 150.0 |         |
|           |                                            | Z | 2.62  | 68.01  | 17.15 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.00  | 69.14  | 18.91 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.26  | 69.52  | 18.99 |      | 150.0 |         |
|           |                                            | Z | 2.50  | 66.64  | 17.62 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 4.20  | 75.46  | 21.41 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.55  | 75.36  | 21.25 |      | 150.0 |         |
|           |                                            | Z | 3.07  | 71.17  | 19.59 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 3.46  | 71.44  | 18.74 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.78  | 71.45  | 18.67 |      | 150.0 |         |
|           |                                            | Z | 2.62  | 68.00  | 17.14 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.01 | 69.18 | 18.93 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.27 | 69.56 | 19.01 |      | 150.0 |         |
|           |                                               | Z | 2.51 | 66.67 | 17.63 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 4.22 | 75.53 | 21.45 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.57 | 75.42 | 21.28 |      | 150.0 |         |
|           |                                               | Z | 3.08 | 71.23 | 19.63 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 3.48 | 71.51 | 18.77 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.80 | 71.51 | 18.70 |      | 150.0 |         |
|           |                                               | Z | 2.63 | 68.05 | 17.17 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 3.02 | 69.24 | 19.00 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.28 | 69.61 | 19.07 |      | 150.0 |         |
|           |                                               | Z | 2.52 | 66.73 | 17.71 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 4.35 | 76.17 | 21.80 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.72 | 76.08 | 21.65 |      | 150.0 |         |
|           |                                               | Z | 3.15 | 71.69 | 19.93 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 3.56 | 71.93 | 19.04 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.88 | 71.93 | 18.97 |      | 150.0 |         |
|           |                                               | Z | 2.67 | 68.37 | 17.41 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.54 | 66.68 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.59 | 66.47 | 16.13 |      | 150.0 |         |
|           |                                               | Z | 4.40 | 66.85 | 16.19 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.70 | 66.99 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 66.80 | 16.26 |      | 150.0 |         |
|           |                                               | Z | 4.55 | 67.09 | 16.33 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.74 | 67.02 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.81 | 66.83 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.58 | 67.11 | 16.34 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.54 | 66.74 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.60 | 66.55 | 16.16 |      | 150.0 |         |
|           |                                               | Z | 4.39 | 66.85 | 16.19 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.72 | 67.01 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.78 | 66.83 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.56 | 67.10 | 16.33 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.75 | 67.04 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.81 | 66.85 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.58 | 67.11 | 16.34 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.49 | 66.76 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.55 | 66.56 | 16.12 |      | 150.0 |         |
|           |                                               | Z | 4.34 | 66.89 | 16.16 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.71 | 66.98 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.78 | 66.81 | 16.26 |      | 150.0 |         |
|           |                                               | Z | 4.55 | 67.06 | 16.32 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.75 | 66.96 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.82 | 66.78 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.59 | 67.05 | 16.33 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.08 | 67.12 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.14 | 67.00 | 16.39 |      | 150.0 |         |
|           |                                               | Z | 4.96 | 67.13 | 16.45 |      | 150.0 |         |

|           |                                           |   |       |        |       |      |       |         |
|-----------|-------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.38  | 67.33  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.45  | 67.20  | 16.51 |      | 150.0 |         |
|           |                                           | Z | 5.23  | 67.33  | 16.56 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.13  | 67.23  | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.19  | 67.11  | 16.37 |      | 150.0 |         |
|           |                                           | Z | 4.99  | 67.25  | 16.44 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.82  | 66.29  | 15.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.85  | 65.89  | 15.31 |      | 150.0 |         |
|           |                                           | Z | 2.69  | 66.42  | 15.13 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 40.58 | 118.73 | 35.31 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 36.88 | 113.76 | 33.77 |      | 65.0  |         |
|           |                                           | Z | 6.94  | 88.26  | 25.92 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 36.33 | 114.29 | 33.35 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 31.30 | 108.87 | 31.78 |      | 65.0  |         |
|           |                                           | Z | 6.95  | 87.06  | 24.80 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 13.65 | 104.05 | 33.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 18.81 | 107.23 | 34.08 |      | 65.0  |         |
|           |                                           | Z | 4.50  | 82.80  | 25.97 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 36.18 | 116.36 | 34.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 33.58 | 111.82 | 33.15 |      | 65.0  |         |
|           |                                           | Z | 6.61  | 87.25  | 25.49 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 32.38 | 112.10 | 32.69 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 28.70 | 107.19 | 31.24 |      | 65.0  |         |
|           |                                           | Z | 6.54  | 85.97  | 24.36 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 12.84 | 102.68 | 33.09 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 17.62 | 105.78 | 33.56 |      | 65.0  |         |
|           |                                           | Z | 4.35  | 82.09  | 25.62 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 36.15 | 116.36 | 34.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 33.55 | 111.82 | 33.15 |      | 65.0  |         |
|           |                                           | Z | 6.59  | 87.23  | 25.48 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 32.28 | 112.07 | 32.68 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 28.65 | 107.18 | 31.24 |      | 65.0  |         |
|           |                                           | Z | 6.52  | 85.93  | 24.35 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 12.22 | 101.47 | 32.58 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 16.65 | 104.42 | 33.04 |      | 65.0  |         |
|           |                                           | Z | 4.24  | 81.51  | 25.28 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 36.31 | 116.46 | 34.62 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 33.66 | 111.90 | 33.18 |      | 65.0  |         |
|           |                                           | Z | 6.60  | 87.26  | 25.49 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 33.06 | 112.44 | 32.77 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 29.12 | 107.43 | 31.30 |      | 65.0  |         |
|           |                                           | Z | 6.60  | 86.11  | 24.40 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 12.90 | 102.82 | 33.13 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 17.72 | 105.93 | 33.61 |      | 65.0  |         |
|           |                                           | Z | 4.35  | 82.12  | 25.64 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 36.09 | 116.34 | 34.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 33.52 | 111.82 | 33.15 |      | 65.0  |         |
|           |                                           | Z | 6.58  | 87.20  | 25.47 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 32.17 | 112.03 | 32.67 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 28.59 | 107.16 | 31.23 |      | 65.0 |         |
|           |                                            | Z | 6.49  | 85.89  | 24.34 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 12.85 | 102.75 | 33.11 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 17.65 | 105.86 | 33.59 |      | 65.0 |         |
|           |                                            | Z | 4.34  | 82.09  | 25.63 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 8.52  | 83.40  | 26.72 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.34  | 83.46  | 26.63 |      | 65.0 |         |
|           |                                            | Z | 6.49  | 79.39  | 24.77 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 7.72  | 81.29  | 25.79 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.22  | 80.66  | 25.42 |      | 65.0 |         |
|           |                                            | Z | 5.72  | 76.85  | 23.63 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 5.95  | 76.72  | 24.82 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.41  | 76.67  | 24.65 |      | 65.0 |         |
|           |                                            | Z | 4.75  | 73.34  | 22.98 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 6.67  | 78.45  | 19.67 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.20  | 80.91  | 21.14 |      | 65.0 |         |
|           |                                            | Z | 3.50  | 69.23  | 14.35 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 6.39  | 77.48  | 19.23 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.92  | 80.07  | 20.76 |      | 65.0 |         |
|           |                                            | Z | 3.42  | 68.65  | 14.03 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 8.15  | 85.97  | 22.95 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.24  | 86.80  | 23.49 |      | 65.0 |         |
|           |                                            | Z | 4.03  | 75.23  | 17.77 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 5.50  | 76.42  | 20.00 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.26  | 77.49  | 20.66 |      | 65.0 |         |
|           |                                            | Z | 3.95  | 71.61  | 16.94 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 5.40  | 75.54  | 19.60 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.16  | 76.66  | 20.28 |      | 65.0 |         |
|           |                                            | Z | 3.89  | 70.88  | 16.59 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 9.66  | 89.43  | 25.19 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.35 | 89.11  | 25.13 |      | 65.0 |         |
|           |                                            | Z | 5.64  | 80.91  | 21.33 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 6.21  | 78.20  | 22.44 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.93  | 79.00  | 22.73 |      | 65.0 |         |
|           |                                            | Z | 4.95  | 74.96  | 20.57 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 5.85  | 75.76  | 21.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.49  | 76.44  | 21.31 |      | 65.0 |         |
|           |                                            | Z | 4.69  | 72.73  | 19.17 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 8.41  | 86.24  | 25.10 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.13  | 86.11  | 24.91 |      | 65.0 |         |
|           |                                            | Z | 5.95  | 81.04  | 22.79 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 5.81  | 74.45  | 20.83 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.39  | 75.11  | 21.05 |      | 65.0 |         |
|           |                                            | Z | 4.88  | 72.13  | 19.42 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 6.16  | 75.32  | 21.51 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.77  | 75.99  | 21.73 |      | 65.0 |         |
|           |                                            | Z | 5.19  | 73.05  | 20.14 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 6.96 | 80.42 | 23.12 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.59 | 80.64 | 23.06 |      | 65.0 |         |
|           |                                             | Z | 5.51 | 77.21 | 21.58 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 4.89 | 73.41 | 16.49 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.68 | 77.30 | 18.76 |      | 65.0 |         |
|           |                                             | Z | 2.46 | 64.75 | 10.88 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 4.63 | 72.26 | 15.89 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.35 | 76.13 | 18.19 |      | 65.0 |         |
|           |                                             | Z | 2.42 | 64.27 | 10.52 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 5.50 | 79.01 | 19.45 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.01 | 81.77 | 20.90 |      | 65.0 |         |
|           |                                             | Z | 2.56 | 68.30 | 13.54 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 5.80 | 77.14 | 20.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.53 | 78.01 | 21.38 |      | 65.0 |         |
|           |                                             | Z | 4.38 | 73.08 | 18.36 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 5.78 | 76.67 | 20.70 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.51 | 77.60 | 21.22 |      | 65.0 |         |
|           |                                             | Z | 4.39 | 72.73 | 18.19 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 8.27 | 86.47 | 24.62 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.00 | 86.40 | 24.57 |      | 65.0 |         |
|           |                                             | Z | 5.46 | 80.05 | 21.57 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 6.19 | 78.15 | 22.39 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.92 | 78.95 | 22.69 |      | 65.0 |         |
|           |                                             | Z | 4.94 | 74.88 | 20.51 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 5.84 | 75.72 | 21.02 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.48 | 76.42 | 21.31 |      | 65.0 |         |
|           |                                             | Z | 4.68 | 72.71 | 19.16 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 8.30 | 85.98 | 24.99 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.03 | 85.88 | 24.80 |      | 65.0 |         |
|           |                                             | Z | 5.88 | 80.81 | 22.67 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 5.96 | 75.09 | 21.13 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.59 | 75.82 | 21.35 |      | 65.0 |         |
|           |                                             | Z | 4.95 | 72.53 | 19.70 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 6.33 | 75.99 | 21.86 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.97 | 76.70 | 22.07 |      | 65.0 |         |
|           |                                             | Z | 5.31 | 73.56 | 20.51 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 7.45 | 81.44 | 23.28 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.11 | 81.58 | 23.17 |      | 65.0 |         |
|           |                                             | Z | 5.81 | 77.97 | 21.72 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 6.50 | 74.59 | 21.27 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.11 | 75.29 | 21.47 |      | 65.0 |         |
|           |                                             | Z | 5.58 | 72.49 | 20.14 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 6.45 | 74.07 | 21.10 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.04 | 74.76 | 21.30 |      | 65.0 |         |
|           |                                             | Z | 5.59 | 72.11 | 20.01 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 6.83 | 77.38 | 21.77 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.44 | 77.78 | 21.79 |      | 65.0 |         |
|           |                                             | Z | 5.71 | 75.01 | 20.64 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.62  | 66.75 | 15.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.61  | 66.15 | 15.17 |      | 150.0 |         |
|           |                                                                    | Z | 2.54  | 67.07 | 15.23 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.67  | 68.55 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.61  | 67.31 | 15.31 |      | 150.0 |         |
|           |                                                                    | Z | 1.61  | 68.63 | 15.84 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.74  | 60.91 | 6.37  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.31  | 62.75 | 8.24  |      | 50.0  |         |
|           |                                                                    | Z | 1.34  | 59.32 | 4.61  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 9.23  | 83.71 | 19.86 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 16.13 | 92.59 | 23.80 |      | 50.0  |         |
|           |                                                                    | Z | 2.80  | 66.68 | 11.50 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 9.55  | 84.14 | 20.09 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 16.22 | 92.62 | 23.87 |      | 50.0  |         |
|           |                                                                    | Z | 2.90  | 67.01 | 11.74 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.55  | 69.78 | 14.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.48  | 68.23 | 14.09 |      | 150.0 |         |
|           |                                                                    | Z | 1.19  | 67.52 | 12.47 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.89  | 66.83 | 13.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.85  | 65.35 | 12.57 |      | 150.0 |         |
|           |                                                                    | Z | 0.74  | 65.55 | 11.46 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.27  | 72.61 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.03  | 68.80 | 14.67 |      | 150.0 |         |
|           |                                                                    | Z | 1.20  | 72.32 | 14.93 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 2.34  | 81.60 | 20.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.43  | 73.64 | 17.27 |      | 150.0 |         |
|           |                                                                    | Z | 3.93  | 87.90 | 20.92 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 16.32 | 98.49 | 29.02 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 11.98 | 92.39 | 27.58 |      | 50.0  |         |
|           |                                                                    | Z | 18.77 | 96.90 | 26.52 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.80  | 70.02 | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.77  | 69.27 | 16.41 |      | 150.0 |         |
|           |                                                                    | Z | 2.65  | 69.87 | 16.82 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.62  | 68.28 | 14.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.62  | 67.40 | 14.26 |      | 150.0 |         |
|           |                                                                    | Z | 1.32  | 66.56 | 12.71 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 2.59  | 69.34 | 14.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.92  | 70.30 | 15.01 |      | 150.0 |         |
|           |                                                                    | Z | 1.54  | 64.05 | 10.22 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.92  | 64.86 | 11.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.24  | 65.95 | 12.27 |      | 150.0 |         |
|           |                                                                    | Z | 1.26  | 61.60 | 8.20  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.85  | 66.06 | 17.86 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.97  | 65.84 | 17.76 |      | 50.0  |         |
|           |                                                                    | Z | 4.42  | 65.27 | 17.23 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.22  | 66.19 | 18.31 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.38  | 66.17 | 18.31 |      | 50.0  |         |
|           |                                                                    | Z | 4.86  | 65.76 | 17.88 |      | 50.0  |         |

|           |                                                                     |   |       |        |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.96  | 65.79  | 18.13 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 5.14  | 65.84  | 18.17 |       | 50.0  |         |
|           |                                                                     | Z | 4.61  | 65.34  | 17.65 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.78  | 65.69  | 17.62 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.94  | 65.66  | 17.62 |       | 50.0  |         |
|           |                                                                     | Z | 4.45  | 65.35  | 17.22 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.24  | 66.91  | 19.40 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.54  | 67.57  | 19.86 |       | 35.0  |         |
|           |                                                                     | Z | 3.84  | 65.89  | 18.29 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.62  | 66.22  | 19.11 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.86  | 66.59  | 19.39 |       | 35.0  |         |
|           |                                                                     | Z | 4.26  | 65.53  | 18.31 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.50  | 66.31  | 19.05 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.77  | 66.81  | 19.39 |       | 35.0  |         |
|           |                                                                     | Z | 4.12  | 65.47  | 18.17 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.47  | 66.49  | 19.18 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.73  | 66.98  | 19.51 |       | 35.0  |         |
|           |                                                                     | Z | 4.09  | 65.63  | 18.30 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.68  | 66.45  | 19.27 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.93  | 66.86  | 19.56 |       | 35.0  |         |
|           |                                                                     | Z | 4.28  | 65.63  | 18.41 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.56  | 66.25  | 19.08 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.81  | 66.65  | 19.36 |       | 35.0  |         |
|           |                                                                     | Z | 4.20  | 65.54  | 18.28 |       | 35.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.16  | 69.26  | 16.50 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.13  | 68.60  | 16.08 |       | 150.0 |         |
|           |                                                                     | Z | 3.01  | 69.09  | 16.45 |       | 150.0 |         |
| 10313-AAA | IDEN 1:3                                                            | X | 8.00  | 86.23  | 21.34 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 8.53  | 85.21  | 20.95 |       | 70.0  |         |
|           |                                                                     | Z | 3.31  | 75.28  | 17.31 |       | 70.0  |         |
| 10314-AAA | IDEN 1:6                                                            | X | 12.68 | 100.31 | 29.33 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 13.31 | 98.73  | 28.67 |       | 30.0  |         |
|           |                                                                     | Z | 5.19  | 85.23  | 24.17 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.10  | 64.07  | 15.53 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.10  | 63.56  | 15.08 |       | 150.0 |         |
|           |                                                                     | Z | 1.08  | 63.95  | 15.31 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.59  | 66.75  | 16.41 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.66  | 66.58  | 16.32 |       | 150.0 |         |
|           |                                                                     | Z | 4.43  | 66.78  | 16.29 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.59  | 66.75  | 16.41 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.66  | 66.58  | 16.32 |       | 150.0 |         |
|           |                                                                     | Z | 4.43  | 66.78  | 16.29 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.69  | 67.06  | 16.37 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.77  | 66.86  | 16.25 |       | 150.0 |         |
|           |                                                                     | Z | 4.51  | 67.11  | 16.31 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.41  | 67.26  | 16.54 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.45  | 67.06  | 16.42 |       | 150.0 |         |
|           |                                                                     | Z | 5.18  | 66.94  | 16.33 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.65   | 67.49  | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.72   | 67.43  | 16.45 |      | 150.0 |         |
|           |                                                                                | Z | 5.51   | 67.47  | 16.48 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 1.55   | 69.78  | 14.51 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.48   | 68.23  | 14.09 |      | 115.0 |         |
|           |                                                                                | Z | 1.19   | 67.52  | 12.47 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 1.55   | 69.78  | 14.51 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.48   | 68.23  | 14.09 |      | 115.0 |         |
|           |                                                                                | Z | 1.19   | 67.52  | 12.47 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 100.00 | 120.41 | 29.76 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 19.72  | 99.25  | 25.38 |      | 100.0 |         |
|           |                                                                                | Z | 22.86  | 100.95 | 24.14 |      | 100.0 |         |
| 10410-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 100.00 | 125.71 | 31.88 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 124.16 | 31.78 |      | 80.0  |         |
|           |                                                                                | Z | 8.15   | 91.76  | 22.46 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.03   | 63.26  | 14.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.02   | 62.63  | 14.41 |      | 150.0 |         |
|           |                                                                                | Z | 1.03   | 63.39  | 14.88 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.54   | 66.72  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.59   | 66.51  | 16.19 |      | 150.0 |         |
|           |                                                                                | Z | 4.40   | 66.84  | 16.26 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.54   | 66.72  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.59   | 66.51  | 16.19 |      | 150.0 |         |
|           |                                                                                | Z | 4.40   | 66.84  | 16.26 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.53   | 66.89  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.58   | 66.66  | 16.20 |      | 150.0 |         |
|           |                                                                                | Z | 4.40   | 67.05  | 16.32 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.55   | 66.83  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.60   | 66.61  | 16.21 |      | 150.0 |         |
|           |                                                                                | Z | 4.41   | 66.98  | 16.30 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.66   | 66.83  | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.72   | 66.62  | 16.23 |      | 150.0 |         |
|           |                                                                                | Z | 4.52   | 66.95  | 16.31 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 4.82   | 67.13  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.90   | 66.96  | 16.35 |      | 150.0 |         |
|           |                                                                                | Z | 4.65   | 67.21  | 16.40 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 4.75   | 67.09  | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.82   | 66.90  | 16.32 |      | 150.0 |         |
|           |                                                                                | Z | 4.58   | 67.17  | 16.38 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.35   | 67.37  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.42   | 67.27  | 16.52 |      | 150.0 |         |
|           |                                                                                | Z | 5.19   | 67.35  | 16.55 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.36   | 67.42  | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.42   | 67.27  | 16.52 |      | 150.0 |         |
|           |                                                                                | Z | 5.21   | 67.42  | 16.58 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.37   | 67.38  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.43   | 67.25  | 16.50 |      | 150.0 |         |
|           |                                                                | Z | 5.18   | 67.23  | 16.48 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.24   | 70.83  | 18.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.26   | 70.25  | 18.02 |      | 150.0 |         |
|           |                                                                | Z | 4.20   | 71.89  | 18.27 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.21   | 67.30  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.28   | 67.03  | 16.19 |      | 150.0 |         |
|           |                                                                | Z | 4.03   | 67.45  | 16.18 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.51   | 67.15  | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.58   | 66.93  | 16.27 |      | 150.0 |         |
|           |                                                                | Z | 4.34   | 67.27  | 16.32 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.76   | 67.12  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.83   | 66.94  | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 4.59   | 67.20  | 16.40 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.34   | 71.72  | 18.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.35   | 71.03  | 17.99 |      | 150.0 |         |
|           |                                                                | Z | 4.31   | 72.81  | 18.12 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 125.48 | 31.77 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 123.97 | 31.69 |      | 80.0  |         |
|           |                                                                | Z | 7.63   | 90.76  | 22.11 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.51   | 67.35  | 15.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.58   | 66.99  | 15.55 |      | 150.0 |         |
|           |                                                                | Z | 3.28   | 67.36  | 15.16 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.06   | 67.09  | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.12   | 66.80  | 16.05 |      | 150.0 |         |
|           |                                                                | Z | 3.89   | 67.25  | 16.05 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.33   | 66.98  | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.39   | 66.75  | 16.16 |      | 150.0 |         |
|           |                                                                | Z | 4.18   | 67.10  | 16.22 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.53   | 66.89  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.58   | 66.69  | 16.19 |      | 150.0 |         |
|           |                                                                | Z | 4.39   | 66.98  | 16.26 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.39   | 67.51  | 15.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.48   | 67.19  | 15.21 |      | 150.0 |         |
|           |                                                                | Z | 3.10   | 67.22  | 14.48 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.22   | 67.91  | 16.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.28   | 67.83  | 16.68 |      | 150.0 |         |
|           |                                                                | Z | 6.11   | 67.90  | 16.72 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.80   | 65.37  | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.83   | 65.15  | 15.90 |      | 150.0 |         |
|           |                                                                | Z | 3.74   | 65.57  | 15.99 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.21   | 66.83  | 14.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.31   | 66.55  | 14.68 |      | 150.0 |         |
|           |                                                                | Z | 2.82   | 66.01  | 13.39 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.29   | 65.14  | 15.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.36   | 64.71  | 15.51 |      | 150.0 |         |
|           |                                                                | Z | 4.04   | 65.27  | 15.07 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.96   | 69.26  | 16.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.88   | 67.02  | 15.53 |      | 150.0 |         |
|           |                                                                   | Z | 0.94   | 69.35  | 16.76 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 131.25 | 34.47 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 128.59 | 33.89 |      | 80.0  |         |
|           |                                                                   | Z | 3.16   | 81.29  | 20.28 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 18.15  | 90.54  | 19.55 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 110.06 | 25.23 |      | 80.0  |         |
|           |                                                                   | Z | 0.71   | 60.00  | 7.72  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.32   | 68.92  | 12.27 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 12.78  | 85.50  | 18.46 |      | 80.0  |         |
|           |                                                                   | Z | 0.72   | 60.00  | 7.06  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 128.50 | 33.02 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 126.31 | 32.66 |      | 80.0  |         |
|           |                                                                   | Z | 2.43   | 77.27  | 18.20 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 7.48   | 81.44  | 16.98 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 53.06  | 102.63 | 23.42 |      | 80.0  |         |
|           |                                                                   | Z | 0.71   | 60.00  | 7.65  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.86   | 66.75  | 11.37 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 7.10   | 79.26  | 16.56 |      | 80.0  |         |
|           |                                                                   | Z | 0.72   | 60.00  | 7.01  |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 128.82 | 33.16 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 126.57 | 32.78 |      | 80.0  |         |
|           |                                                                   | Z | 2.60   | 78.29  | 18.60 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 9.21   | 83.60  | 17.62 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 76.07  | 106.68 | 24.37 |      | 80.0  |         |
|           |                                                                   | Z | 0.70   | 60.00  | 7.67  |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.87   | 66.82  | 11.40 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 7.22   | 79.45  | 16.62 |      | 80.0  |         |
|           |                                                                   | Z | 0.72   | 60.00  | 7.01  |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 128.87 | 33.17 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 126.61 | 32.79 |      | 80.0  |         |
|           |                                                                   | Z | 2.61   | 78.33  | 18.61 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 9.03   | 83.37  | 17.54 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 75.72  | 106.57 | 24.32 |      | 80.0  |         |
|           |                                                                   | Z | 0.70   | 60.00  | 7.66  |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.85   | 66.72  | 11.34 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 7.17   | 79.36  | 16.58 |      | 80.0  |         |
|           |                                                                   | Z | 0.72   | 60.00  | 6.99  |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 128.83 | 33.15 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 126.57 | 32.77 |      | 80.0  |         |
|           |                                                                   | Z | 2.60   | 78.28  | 18.59 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 8.86   | 83.19  | 17.49 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 73.20  | 106.22 | 24.25 |      | 80.0  |         |
|           |                                                                   | Z | 0.70   | 60.00  | 7.66  |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.84   | 66.67  | 11.33 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 7.07   | 79.22  | 16.54 |      | 80.0  |         |
|           |                                                                   | Z | 0.72   | 60.00  | 6.99  |      | 80.0  |         |

|           |                                                                     |   |       |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 7.55  | 81.52  | 16.98 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 56.45 | 103.26 | 23.54 |      | 80.0 |         |
|           |                                                                     | Z | 0.70  | 60.00  | 7.63  |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 1.82  | 66.56  | 11.27 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.95  | 79.03  | 16.47 |      | 80.0 |         |
|           |                                                                     | Z | 0.72  | 60.00  | 6.98  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 10.99 | 93.23  | 25.61 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 9.79  | 90.18  | 24.96 |      | 80.0 |         |
|           |                                                                     | Z | 4.54  | 80.48  | 20.41 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 12.16 | 88.23  | 21.88 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 11.98 | 87.55  | 22.28 |      | 80.0 |         |
|           |                                                                     | Z | 2.88  | 70.37  | 14.48 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 8.71  | 82.91  | 19.80 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 9.82  | 84.02  | 20.80 |      | 80.0 |         |
|           |                                                                     | Z | 2.18  | 66.77  | 12.57 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.05  | 77.33  | 19.19 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.17  | 76.68  | 19.19 |      | 80.0 |         |
|           |                                                                     | Z | 2.07  | 68.66  | 14.58 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.93  | 75.57  | 17.70 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.34  | 78.50  | 19.36 |      | 80.0 |         |
|           |                                                                     | Z | 1.80  | 63.38  | 11.04 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.47  | 74.01  | 17.11 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.79  | 76.98  | 18.82 |      | 80.0 |         |
|           |                                                                     | Z | 1.76  | 62.89  | 10.79 |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.05  | 77.49  | 20.34 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.20  | 76.76  | 20.09 |      | 80.0 |         |
|           |                                                                     | Z | 2.71  | 72.24  | 17.50 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.54  | 71.63  | 17.34 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.76  | 71.58  | 17.54 |      | 80.0 |         |
|           |                                                                     | Z | 2.51  | 67.51  | 14.60 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.49  | 71.03  | 17.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.74  | 71.08  | 17.31 |      | 80.0 |         |
|           |                                                                     | Z | 2.49  | 67.04  | 14.35 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.92  | 74.84  | 20.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.21  | 74.77  | 19.87 |      | 80.0 |         |
|           |                                                                     | Z | 2.99  | 71.49  | 18.31 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.58  | 70.14  | 18.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.82  | 70.22  | 18.04 |      | 80.0 |         |
|           |                                                                     | Z | 3.03  | 68.36  | 16.75 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.66  | 69.89  | 17.90 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.90  | 69.97  | 17.95 |      | 80.0 |         |
|           |                                                                     | Z | 3.10  | 68.21  | 16.67 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 4.00  | 72.50  | 19.16 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.28  | 72.62  | 19.08 |      | 80.0 |         |
|           |                                                                     | Z | 3.25  | 70.05  | 17.90 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.86  | 68.99  | 17.79 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.11  | 69.18  | 17.85 |      | 80.0 |         |
|           |                                                                     | Z | 3.37  | 67.61  | 16.86 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.92 | 68.82 | 17.72 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.17 | 69.02 | 17.78 |      | 80.0 |         |
|           |                                                                      | Z | 3.43 | 67.50 | 16.80 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.43 | 74.41 | 19.78 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.75 | 74.52 | 19.68 |      | 80.0 |         |
|           |                                                                      | Z | 3.49 | 71.39 | 18.37 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.90 | 69.39 | 18.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.16 | 69.65 | 18.06 |      | 80.0 |         |
|           |                                                                      | Z | 3.39 | 67.86 | 17.06 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.97 | 69.05 | 17.88 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.22 | 69.30 | 17.94 |      | 80.0 |         |
|           |                                                                      | Z | 3.47 | 67.65 | 16.99 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 2.87 | 72.14 | 16.05 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.23 | 72.92 | 16.83 |      | 80.0 |         |
|           |                                                                      | Z | 1.19 | 62.14 | 10.12 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.73 | 63.11 | 10.85 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.27 | 65.45 | 12.56 |      | 80.0 |         |
|           |                                                                      | Z | 1.15 | 60.00 | 7.68  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.65 | 62.30 | 10.28 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.18 | 64.69 | 12.05 |      | 80.0 |         |
|           |                                                                      | Z | 1.17 | 60.00 | 7.51  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.87 | 75.87 | 20.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.07 | 75.40 | 19.81 |      | 80.0 |         |
|           |                                                                      | Z | 2.80 | 71.83 | 17.80 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.57 | 71.05 | 17.60 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.78 | 70.97 | 17.70 |      | 80.0 |         |
|           |                                                                      | Z | 2.79 | 68.23 | 15.59 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.61 | 70.84 | 17.44 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.84 | 70.79 | 17.56 |      | 80.0 |         |
|           |                                                                      | Z | 2.82 | 68.03 | 15.41 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.87 | 74.62 | 19.92 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.15 | 74.55 | 19.77 |      | 80.0 |         |
|           |                                                                      | Z | 2.95 | 71.29 | 18.21 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.57 | 70.04 | 17.95 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.80 | 70.13 | 17.99 |      | 80.0 |         |
|           |                                                                      | Z | 3.01 | 68.26 | 16.69 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.64 | 69.79 | 17.85 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.88 | 69.88 | 17.89 |      | 80.0 |         |
|           |                                                                      | Z | 3.09 | 68.12 | 16.62 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 4.39 | 74.26 | 19.71 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.71 | 74.37 | 19.61 |      | 80.0 |         |
|           |                                                                      | Z | 3.46 | 71.26 | 18.30 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.89 | 69.33 | 17.97 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.14 | 69.59 | 18.03 |      | 80.0 |         |
|           |                                                                      | Z | 3.38 | 67.80 | 17.02 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.95 | 68.98 | 17.84 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.21 | 69.23 | 17.90 |      | 80.0  |         |
|           |                                                                     | Z | 3.46 | 67.59 | 16.95 |      | 80.0  |         |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.62 | 72.40 | 18.91 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.92 | 72.59 | 18.86 |      | 80.0  |         |
|           |                                                                     | Z | 3.86 | 70.20 | 17.85 |      | 80.0  |         |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.34 | 68.87 | 17.84 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.61 | 69.18 | 17.91 |      | 80.0  |         |
|           |                                                                     | Z | 3.85 | 67.53 | 17.06 |      | 80.0  |         |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.39 | 68.57 | 17.74 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.65 | 68.86 | 17.81 |      | 80.0  |         |
|           |                                                                     | Z | 3.92 | 67.35 | 17.00 |      | 80.0  |         |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.95 | 74.43 | 19.59 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.29 | 74.60 | 19.52 |      | 80.0  |         |
|           |                                                                     | Z | 3.97 | 71.52 | 18.28 |      | 80.0  |         |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.24 | 69.19 | 17.98 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.52 | 69.55 | 18.06 |      | 80.0  |         |
|           |                                                                     | Z | 3.73 | 67.67 | 17.13 |      | 80.0  |         |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.25 | 68.69 | 17.82 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.51 | 69.03 | 17.90 |      | 80.0  |         |
|           |                                                                     | Z | 3.78 | 67.33 | 17.02 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.99 | 63.46 | 15.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.98 | 62.78 | 14.45 |      | 150.0 |         |
|           |                                                                     | Z | 0.99 | 63.59 | 14.96 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.69 | 72.54 | 18.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.56 | 68.11 | 16.08 |      | 150.0 |         |
|           |                                                                     | Z | 0.67 | 72.15 | 18.45 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.85 | 65.62 | 15.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.82 | 64.42 | 14.91 |      | 150.0 |         |
|           |                                                                     | Z | 0.84 | 65.62 | 15.72 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.53 | 66.80 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.59 | 66.58 | 16.17 |      | 150.0 |         |
|           |                                                                     | Z | 4.39 | 66.94 | 16.26 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.71 | 67.02 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.78 | 66.84 | 16.30 |      | 150.0 |         |
|           |                                                                     | Z | 4.54 | 67.11 | 16.34 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.56 | 66.98 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.63 | 66.80 | 16.22 |      | 150.0 |         |
|           |                                                                     | Z | 4.40 | 67.05 | 16.26 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.49 | 66.97 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.56 | 66.79 | 16.20 |      | 150.0 |         |
|           |                                                                     | Z | 4.33 | 67.02 | 16.25 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.56 | 67.08 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.62 | 66.86 | 16.28 |      | 150.0 |         |
|           |                                                                     | Z | 4.38 | 67.14 | 16.34 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.44 | 66.96 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.50 | 66.72 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 4.31 | 67.14 | 16.26 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.50 | 67.00 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.57 | 66.78 | 16.25 |      | 150.0 |         |
|           |                                                            | Z | 4.33 | 67.10 | 16.33 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.49 | 66.06 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.54 | 65.82 | 15.83 |      | 150.0 |         |
|           |                                                            | Z | 4.36 | 66.21 | 15.95 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.65 | 66.41 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.72 | 66.20 | 15.98 |      | 150.0 |         |
|           |                                                            | Z | 4.49 | 66.49 | 16.07 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.58 | 66.37 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.64 | 66.16 | 15.92 |      | 150.0 |         |
|           |                                                            | Z | 4.42 | 66.47 | 16.01 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.59 | 66.39 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.18 | 15.96 |      | 150.0 |         |
|           |                                                            | Z | 4.43 | 66.48 | 16.04 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.59 | 66.39 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.18 | 15.96 |      | 150.0 |         |
|           |                                                            | Z | 4.43 | 66.48 | 16.04 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.58 | 66.48 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.29 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 4.40 | 66.51 | 16.02 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.44 | 66.34 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.51 | 66.14 | 15.90 |      | 150.0 |         |
|           |                                                            | Z | 4.28 | 66.37 | 15.96 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.60 | 66.44 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.66 | 66.22 | 15.94 |      | 150.0 |         |
|           |                                                            | Z | 4.44 | 66.56 | 16.05 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.13 | 66.46 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.19 | 66.32 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.99 | 66.46 | 16.09 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.20 | 66.64 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.25 | 66.49 | 16.10 |      | 150.0 |         |
|           |                                                            | Z | 5.03 | 66.59 | 16.15 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.07 | 66.60 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.12 | 66.44 | 16.06 |      | 150.0 |         |
|           |                                                            | Z | 4.92 | 66.60 | 16.13 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.12 | 66.56 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.18 | 66.41 | 16.05 |      | 150.0 |         |
|           |                                                            | Z | 4.98 | 66.58 | 16.13 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.21 | 66.56 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.28 | 66.45 | 16.11 |      | 150.0 |         |
|           |                                                            | Z | 5.05 | 66.54 | 16.15 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.14 | 66.58 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.20 | 66.45 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 4.98 | 66.51 | 16.15 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 5.12 | 66.46 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.18 | 66.32 | 16.05 |      | 150.0 |         |
|           |                                                    | Z | 4.96 | 66.43 | 16.09 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.27 | 66.53 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.33 | 66.40 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.12 | 66.52 | 16.15 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.34 | 66.55 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.41 | 66.44 | 16.14 |      | 150.0 |         |
|           |                                                    | Z | 5.19 | 66.58 | 16.21 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.45 | 66.57 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.49 | 66.44 | 16.03 |      | 150.0 |         |
|           |                                                    | Z | 5.33 | 66.54 | 16.08 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.64 | 66.98 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.69 | 66.86 | 16.18 |      | 150.0 |         |
|           |                                                    | Z | 5.50 | 66.96 | 16.25 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.50 | 66.75 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.56 | 66.68 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.36 | 66.66 | 16.11 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.57 | 66.80 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.64 | 66.72 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.44 | 66.76 | 16.16 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.80 | 67.67 | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.91 | 67.72 | 16.59 |      | 150.0 |         |
|           |                                                    | Z | 5.58 | 67.38 | 16.44 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.54 | 66.80 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 66.67 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.42 | 66.83 | 16.21 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.54 | 66.82 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 66.72 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.36 | 66.63 | 16.07 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.46 | 66.64 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.51 | 66.51 | 16.00 |      | 150.0 |         |
|           |                                                    | Z | 5.34 | 66.66 | 16.08 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.54 | 66.66 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 66.56 | 16.06 |      | 150.0 |         |
|           |                                                    | Z | 5.39 | 66.61 | 16.09 |      | 150.0 |         |
| 10554-AAB | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.86 | 66.92 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.89 | 66.81 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.75 | 66.87 | 16.15 |      | 150.0 |         |
| 10555-AAB | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.98 | 67.22 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.03 | 67.12 | 16.25 |      | 150.0 |         |
|           |                                                    | Z | 5.84 | 67.10 | 16.25 |      | 150.0 |         |
| 10556-AAB | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.00 | 67.27 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.05 | 67.16 | 16.27 |      | 150.0 |         |
|           |                                                    | Z | 5.88 | 67.20 | 16.30 |      | 150.0 |         |
| 10557-AAB | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.96 | 67.16 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.02 | 67.08 | 16.25 |      | 150.0 |         |
|           |                                                    | Z | 5.84 | 67.08 | 16.25 |      | 150.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAB | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 6.01 | 67.32 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.07 | 67.25 | 16.34 |      | 150.0 |         |
|           |                                                                 | Z | 5.85 | 67.15 | 16.31 |      | 150.0 |         |
| 10560-AAB | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 6.01 | 67.17 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.06 | 67.10 | 16.31 |      | 150.0 |         |
|           |                                                                 | Z | 5.87 | 67.07 | 16.30 |      | 150.0 |         |
| 10561-AAB | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.93 | 67.15 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.98 | 67.06 | 16.32 |      | 150.0 |         |
|           |                                                                 | Z | 5.80 | 67.05 | 16.32 |      | 150.0 |         |
| 10562-AAB | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 6.04 | 67.49 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.12 | 67.48 | 16.53 |      | 150.0 |         |
|           |                                                                 | Z | 5.85 | 67.23 | 16.41 |      | 150.0 |         |
| 10563-AAB | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 6.18 | 67.55 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.43 | 68.00 | 16.75 |      | 150.0 |         |
|           |                                                                 | Z | 5.95 | 67.17 | 16.35 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.86 | 66.88 | 16.45 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.92 | 66.69 | 16.36 |      | 150.0 |         |
|           |                                                                 | Z | 4.71 | 66.96 | 16.39 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.08 | 67.30 | 16.76 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.16 | 67.15 | 16.67 |      | 150.0 |         |
|           |                                                                 | Z | 4.90 | 67.36 | 16.69 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.91 | 67.15 | 16.58 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.99 | 67.00 | 16.50 |      | 150.0 |         |
|           |                                                                 | Z | 4.74 | 67.18 | 16.50 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.94 | 67.52 | 16.92 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.01 | 67.38 | 16.84 |      | 150.0 |         |
|           |                                                                 | Z | 4.77 | 67.57 | 16.87 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.83 | 66.96 | 16.38 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.90 | 66.77 | 16.27 |      | 150.0 |         |
|           |                                                                 | Z | 4.63 | 66.92 | 16.25 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.90 | 67.63 | 17.00 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.96 | 67.44 | 16.88 |      | 150.0 |         |
|           |                                                                 | Z | 4.75 | 67.78 | 17.00 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.93 | 67.48 | 16.92 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.00 | 67.29 | 16.82 |      | 150.0 |         |
|           |                                                                 | Z | 4.76 | 67.58 | 16.89 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.18 | 64.69 | 15.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.20 | 64.37 | 15.58 |      | 130.0 |         |
|           |                                                                 | Z | 1.13 | 64.22 | 15.49 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.19 | 65.27 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.21 | 64.91 | 15.92 |      | 130.0 |         |
|           |                                                                 | Z | 1.14 | 64.74 | 15.83 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 2.77 | 92.16 | 26.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.86 | 83.27 | 22.47 |      | 130.0 |         |
|           |                                                                 | Z | 1.57 | 83.20 | 23.00 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.31 | 71.26 | 19.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.31 | 70.26 | 18.63 |      | 130.0 |         |
|           |                                                                 | Z | 1.20 | 70.00 | 18.67 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.64 | 66.67 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.71 | 66.50 | 16.43 |      | 130.0 |         |
|           |                                                                 | Z | 4.47 | 66.69 | 16.39 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.66 | 66.83 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 66.66 | 16.49 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 66.89 | 16.47 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.86 | 67.11 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.94 | 66.97 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.67 | 67.12 | 16.61 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.76 | 67.25 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.84 | 67.12 | 16.76 |      | 130.0 |         |
|           |                                                                 | Z | 4.57 | 67.26 | 16.72 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.52 | 66.57 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.61 | 66.44 | 16.10 |      | 130.0 |         |
|           |                                                                 | Z | 4.33 | 66.48 | 15.99 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.57 | 66.63 | 16.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.66 | 66.47 | 16.12 |      | 130.0 |         |
|           |                                                                 | Z | 4.36 | 66.53 | 16.01 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.65 | 67.30 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 67.15 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 67.34 | 16.69 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.47 | 66.35 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.56 | 66.21 | 15.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 66.25 | 15.78 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.64 | 66.67 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.71 | 66.50 | 16.43 |      | 130.0 |         |
|           |                                                                 | Z | 4.47 | 66.69 | 16.39 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.66 | 66.83 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 66.66 | 16.49 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 66.89 | 16.47 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.86 | 67.11 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.94 | 66.97 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.67 | 67.12 | 16.61 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.76 | 67.25 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.84 | 67.12 | 16.76 |      | 130.0 |         |
|           |                                                                 | Z | 4.57 | 67.26 | 16.72 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.52 | 66.57 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.61 | 66.44 | 16.10 |      | 130.0 |         |
|           |                                                                 | Z | 4.33 | 66.48 | 15.99 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.57 | 66.63 | 16.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.66 | 66.47 | 16.12 |      | 130.0 |         |
|           |                                                                 | Z | 4.36 | 66.53 | 16.01 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.65 | 67.30 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73 | 67.15 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.48 | 67.34 | 16.69 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.47 | 66.35 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.56 | 66.21 | 15.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 66.25 | 15.78 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.79 | 66.72 | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.86 | 66.57 | 16.53 |      | 130.0 |         |
|           |                                                       | Z | 4.63 | 66.78 | 16.50 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.94 | 67.05 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.02 | 66.91 | 16.66 |      | 130.0 |         |
|           |                                                       | Z | 4.75 | 67.07 | 16.63 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.86 | 66.96 | 16.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.94 | 66.83 | 16.55 |      | 130.0 |         |
|           |                                                       | Z | 4.67 | 66.95 | 16.49 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.91 | 67.12 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.00 | 66.98 | 16.70 |      | 130.0 |         |
|           |                                                       | Z | 4.72 | 67.12 | 16.65 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.88 | 67.08 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.96 | 66.94 | 16.59 |      | 130.0 |         |
|           |                                                       | Z | 4.69 | 67.10 | 16.56 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.82 | 67.08 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.90 | 66.94 | 16.60 |      | 130.0 |         |
|           |                                                       | Z | 4.62 | 67.07 | 16.55 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.77 | 66.98 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.85 | 66.85 | 16.49 |      | 130.0 |         |
|           |                                                       | Z | 4.57 | 66.94 | 16.41 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.75 | 67.19 | 16.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.83 | 67.08 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 4.56 | 67.16 | 16.67 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.46 | 67.23 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.53 | 67.13 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 5.31 | 67.22 | 16.74 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.59 | 67.67 | 17.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.69 | 67.62 | 16.95 |      | 130.0 |         |
|           |                                                       | Z | 5.40 | 67.56 | 16.88 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.48 | 67.41 | 16.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.56 | 67.33 | 16.83 |      | 130.0 |         |
|           |                                                       | Z | 5.31 | 67.36 | 16.79 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.59 | 67.49 | 16.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.65 | 67.34 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 5.41 | 67.42 | 16.75 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.65 | 67.74 | 17.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.74 | 67.66 | 17.04 |      | 130.0 |         |
|           |                                                       | Z | 5.48 | 67.71 | 17.02 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.49 | 67.31 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.53 | 67.10 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 5.37 | 67.37 | 16.83 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.58 | 67.57 | 17.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.65 | 67.44 | 16.92 |      | 130.0 |         |
|           |                                                       | Z | 5.40 | 67.46 | 16.88 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.32 | 66.88 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.42 | 66.88 | 16.50 |      | 130.0 |         |
|           |                                                       | Z | 5.18 | 66.90 | 16.45 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.63 | 66.06 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.69 | 65.87 | 16.14 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 66.14 | 16.16 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.81 | 66.46 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.89 | 66.28 | 16.31 |      | 130.0 |         |
|           |                                                   | Z | 4.62 | 66.47 | 16.30 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.70 | 66.31 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.14 | 16.15 |      | 130.0 |         |
|           |                                                   | Z | 4.52 | 66.31 | 16.13 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.75 | 66.46 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.83 | 66.29 | 16.31 |      | 130.0 |         |
|           |                                                   | Z | 4.57 | 66.47 | 16.29 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.67 | 66.27 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 66.11 | 16.17 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 66.27 | 16.14 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.68 | 66.43 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.26 | 16.21 |      | 130.0 |         |
|           |                                                   | Z | 4.47 | 66.40 | 16.18 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.68 | 66.30 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.16 | 16.10 |      | 130.0 |         |
|           |                                                   | Z | 4.47 | 66.22 | 16.03 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.62 | 66.47 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.70 | 66.33 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 66.44 | 16.27 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.67 | 66.12 | 16.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.75 | 65.95 | 15.95 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 66.11 | 15.92 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.28 | 66.50 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.35 | 66.40 | 16.35 |      | 130.0 |         |
|           |                                                   | Z | 5.12 | 66.44 | 16.33 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.35 | 66.70 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.55 | 16.40 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.57 | 16.37 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.24 | 66.70 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.30 | 66.57 | 16.42 |      | 130.0 |         |
|           |                                                   | Z | 5.08 | 66.64 | 16.42 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.25 | 66.50 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.33 | 66.41 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 5.09 | 66.45 | 16.26 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.34 | 66.53 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.46 | 16.35 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.45 | 16.31 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.34 | 66.65 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.41 | 66.55 | 16.51 |      | 130.0 |         |
|           |                                                   | Z | 5.17 | 66.56 | 16.48 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.35 | 66.81 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.71 | 16.59 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.65 | 16.52 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.23 | 66.36 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.30 | 66.25 | 16.24 |      | 130.0 |         |
|           |                                                    | Z | 5.05 | 66.22 | 16.17 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.42 | 66.55 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.50 | 66.45 | 16.40 |      | 130.0 |         |
|           |                                                    | Z | 5.25 | 66.47 | 16.36 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.75 | 67.41 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.89 | 67.51 | 16.98 |      | 130.0 |         |
|           |                                                    | Z | 5.34 | 66.63 | 16.50 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.59 | 66.56 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.64 | 66.46 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.45 | 66.47 | 16.28 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.82 | 67.13 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.88 | 67.03 | 16.55 |      | 130.0 |         |
|           |                                                    | Z | 5.67 | 67.05 | 16.54 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.61 | 66.64 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.68 | 66.59 | 16.27 |      | 130.0 |         |
|           |                                                    | Z | 5.44 | 66.46 | 16.18 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.69 | 66.69 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.78 | 66.69 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.54 | 66.62 | 16.26 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 6.09 | 68.10 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.25 | 68.29 | 17.11 |      | 130.0 |         |
|           |                                                    | Z | 5.78 | 67.54 | 16.72 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.99 | 67.90 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.12 | 67.99 | 17.15 |      | 130.0 |         |
|           |                                                    | Z | 5.75 | 67.56 | 16.92 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.79 | 67.18 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.85 | 67.07 | 16.70 |      | 130.0 |         |
|           |                                                    | Z | 5.67 | 67.21 | 16.76 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.68 | 66.80 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.74 | 66.74 | 16.37 |      | 130.0 |         |
|           |                                                    | Z | 5.48 | 66.57 | 16.27 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.66 | 66.82 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.73 | 66.76 | 16.44 |      | 130.0 |         |
|           |                                                    | Z | 5.50 | 66.72 | 16.40 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.54 | 66.19 | 15.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.62 | 66.14 | 15.87 |      | 130.0 |         |
|           |                                                    | Z | 5.36 | 66.00 | 15.77 |      | 130.0 |         |
| 10636-AAB | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.00 | 66.92 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.05 | 66.85 | 16.41 |      | 130.0 |         |
|           |                                                    | Z | 5.88 | 66.82 | 16.36 |      | 130.0 |         |
| 10637-AAB | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.16 | 67.31 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.21 | 67.23 | 16.58 |      | 130.0 |         |
|           |                                                    | Z | 6.00 | 67.12 | 16.50 |      | 130.0 |         |
| 10638-AAB | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.16 | 67.28 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.21 | 67.20 | 16.54 |      | 130.0 |         |
|           |                                                    | Z | 6.02 | 67.18 | 16.51 |      | 130.0 |         |

|           |                                                        |   |       |        |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10639-AAB | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 6.13  | 67.21  | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.20  | 67.17  | 16.57 |      | 130.0 |         |
|           |                                                        | Z | 5.98  | 67.06  | 16.49 |      | 130.0 |         |
| 10640-AAB | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 6.13  | 67.23  | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.21  | 67.21  | 16.53 |      | 130.0 |         |
|           |                                                        | Z | 5.95  | 66.98  | 16.40 |      | 130.0 |         |
| 10641-AAB | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.19  | 67.17  | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.24  | 67.06  | 16.48 |      | 130.0 |         |
|           |                                                        | Z | 6.04  | 67.04  | 16.44 |      | 130.0 |         |
| 10642-AAB | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.22  | 67.37  | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.28  | 67.33  | 16.77 |      | 130.0 |         |
|           |                                                        | Z | 6.06  | 67.23  | 16.70 |      | 130.0 |         |
| 10643-AAB | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 6.06  | 67.09  | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.12  | 67.02  | 16.52 |      | 130.0 |         |
|           |                                                        | Z | 5.91  | 66.93  | 16.45 |      | 130.0 |         |
| 10644-AAB | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 6.20  | 67.52  | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.31  | 67.59  | 16.83 |      | 130.0 |         |
|           |                                                        | Z | 5.97  | 67.13  | 16.57 |      | 130.0 |         |
| 10645-AAB | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.41  | 67.77  | 16.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.76  | 68.49  | 17.23 |      | 130.0 |         |
|           |                                                        | Z | 6.10  | 67.18  | 16.56 |      | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 32.54 | 128.38 | 44.23 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 33.21 | 124.21 | 42.28 |      | 60.0  |         |
|           |                                                        | Z | 8.58  | 97.27  | 34.21 |      | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 24.86 | 122.50 | 42.74 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 27.83 | 120.75 | 41.46 |      | 60.0  |         |
|           |                                                        | Z | 7.33  | 94.04  | 33.20 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.71  | 63.99  | 11.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.72  | 63.38  | 11.01 |      | 150.0 |         |
|           |                                                        | Z | 0.57  | 62.72  | 9.40  |      | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.64  | 67.29  | 16.91 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.79  | 67.25  | 16.93 |      | 80.0  |         |
|           |                                                        | Z | 3.31  | 66.63  | 16.20 |      | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 4.13  | 66.44  | 16.95 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.30  | 66.53  | 16.99 |      | 80.0  |         |
|           |                                                        | Z | 3.84  | 65.89  | 16.44 |      | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 4.11  | 66.04  | 16.93 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.26  | 66.17  | 16.97 |      | 80.0  |         |
|           |                                                        | Z | 3.86  | 65.50  | 16.46 |      | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 4.17  | 66.02  | 16.96 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.32  | 66.18  | 17.01 |      | 80.0  |         |
|           |                                                        | Z | 3.93  | 65.42  | 16.50 |      | 80.0  |         |

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



Accredited by the Swiss Accreditation Service (SAS)  
 The Swiss Accreditation Service is one of the signatories to the EA  
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **EX3-7410\_Jul17**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7410**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v6**  
**Calibration procedure for dosimetric E-field probes**

*BN ✓*  
*8/3/2017*

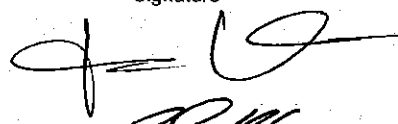
Calibration date: **July 17, 2017**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature  $(22 \pm 3)^{\circ}\text{C}$  and humidity  $< 70\%$ .

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-17 (No. 217-02521/02522)   | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-17 (No. 217-02521)         | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-17 (No. 217-02525)         | Apr-18                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 07-Apr-17 (No. 217-02528)         | Apr-18                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-16 (No. ES3-3013_Dec16)    | Dec-17                 |
| DAE4                       | SN: 660          | 7-Dec-16 (No. DAE4-660_Dec16)     | Dec-17                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-16) | In house check: Jun-18 |
| Network Analyzer HP 8753E  | SN: US37390585   | 18-Oct-01 (in house check Oct-16) | In house check: Oct-17 |

|                |                               |                                          |                                                                                                    |
|----------------|-------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------|
| Calibrated by: | Name<br><b>Jeton Kastrati</b> | Function<br><b>Laboratory Technician</b> | Signature<br> |
| Approved by:   | Name<br><b>Katja Pokovic</b>  | Technical Manager                        |               |

Issued: July 17, 2017

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## Glossary:

|                          |                                                                                                                                                         |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| TSL                      | tissue simulating liquid                                                                                                                                |
| NORM <sub>x,y,z</sub>    | sensitivity in free space                                                                                                                               |
| ConvF                    | sensitivity in TSL / NORM <sub>x,y,z</sub>                                                                                                              |
| DCP                      | diode compression point                                                                                                                                 |
| CF                       | crest factor (1/duty_cycle) of the RF signal                                                                                                            |
| A, B, C, D               | modulation dependent linearization parameters                                                                                                           |
| Polarization $\varphi$   | $\varphi$ rotation around probe axis                                                                                                                    |
| Polarization $\vartheta$ | $\vartheta$ rotation around an axis that is in the plane normal to probe axis (at measurement center),<br>i.e., $\vartheta = 0$ is normal to probe axis |
| Connector Angle          | information used in DASY system to align probe sensor X to the robot coordinate system                                                                  |

## Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

## Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\vartheta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the  $E^2$ -field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub>** = NORM<sub>x,y,z</sub> \* frequency\_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).

# Probe EX3DV4

## SN:7410

Manufactured: November 24, 2015  
Calibrated: July 17, 2017

Calibrated for DASY/EASY Systems  
(Note: non-compatible with DASY2 system!)

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.40     | 0.46     | 0.43     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 95.4     | 94.7     | 91.2     |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                          | 1.0 | 0.00    | 130.7    | $\pm 3.5 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 146.7    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 132.5    |                           |

Note: For details on UID parameters see Appendix.

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$\text{V}^{-1}$ | T1<br>$\text{ms}\cdot\text{V}^{-2}$ | T2<br>$\text{ms}\cdot\text{V}^{-1}$ | T3<br>ms | T4<br>$\text{V}^{-2}$ | T5<br>$\text{V}^{-1}$ | T6    |
|---|----------|----------|-----------------------------|-------------------------------------|-------------------------------------|----------|-----------------------|-----------------------|-------|
| X | 41.43    | 313.6    | 36.54                       | 8.525                               | 0.381                               | 5.024    | 0.000                 | 0.467                 | 1.003 |
| Y | 41.67    | 315.5    | 36.57                       | 10.32                               | 0.000                               | 5.055    | 0.334                 | 0.426                 | 1.004 |
| Z | 51.58    | 393.9    | 37.05                       | 11.42                               | 0.427                               | 5.066    | 0.000                 | 0.561                 | 1.006 |

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the  $E^2$ -field uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 10.60   | 10.60   | 10.60   | 0.53               | 0.80                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 10.08   | 10.08   | 10.08   | 0.41               | 0.98                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.66    | 8.66    | 8.66    | 0.41               | 0.82                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.37    | 8.37    | 8.37    | 0.28               | 1.19                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 8.02    | 8.02    | 8.02    | 0.35               | 0.80                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.68    | 7.68    | 7.68    | 0.33               | 0.89                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.42    | 7.42    | 7.42    | 0.40               | 0.80                    | ± 12.0 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 10.19   | 10.19   | 10.19   | 0.33               | 1.02                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 9.95    | 9.95    | 9.95    | 0.50               | 0.80                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.32    | 8.32    | 8.32    | 0.39               | 0.86                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.98    | 7.98    | 7.98    | 0.44               | 0.86                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.85    | 7.85    | 7.85    | 0.44               | 0.84                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.69    | 7.69    | 7.69    | 0.37               | 0.89                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.43    | 7.43    | 7.43    | 0.28               | 0.99                    | ± 12.0 %  |

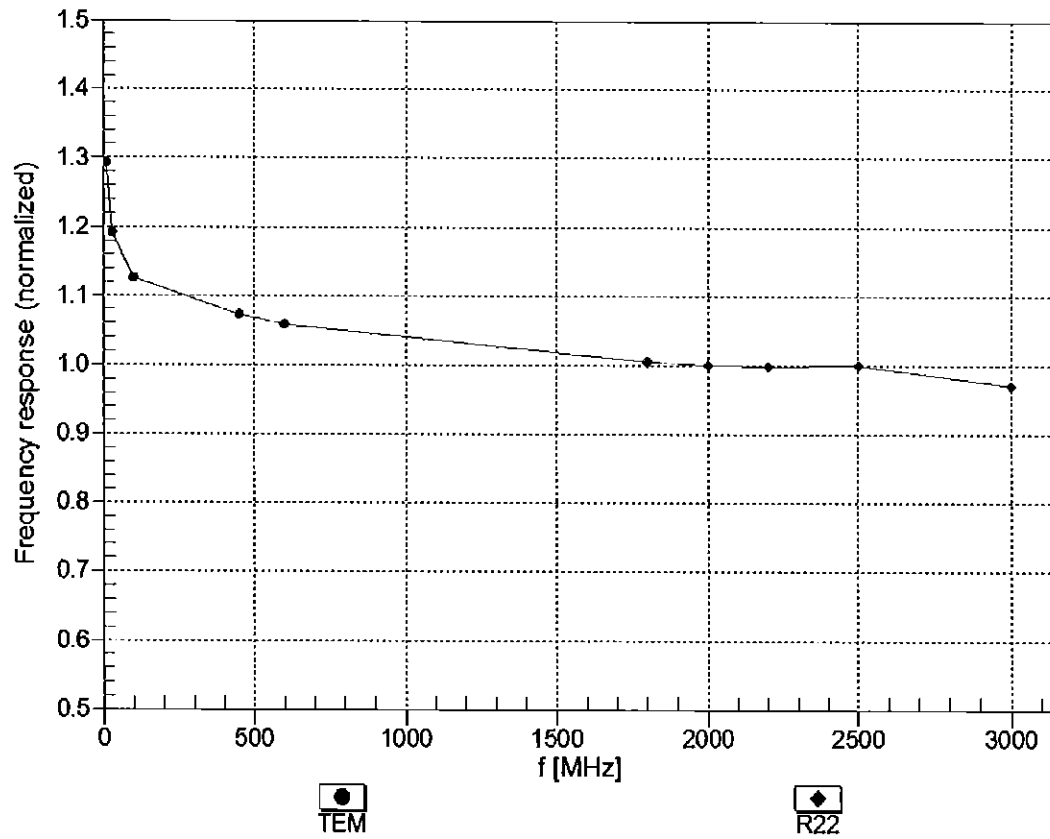
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

## Frequency Response of E-Field

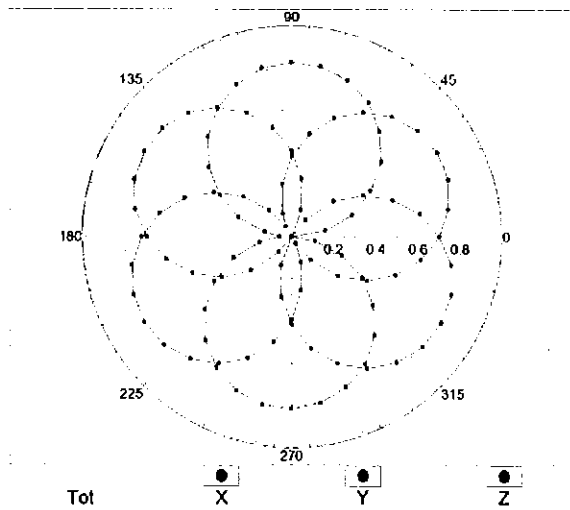
(TEM-Cell:ifi110 EXX, Waveguide: R22)



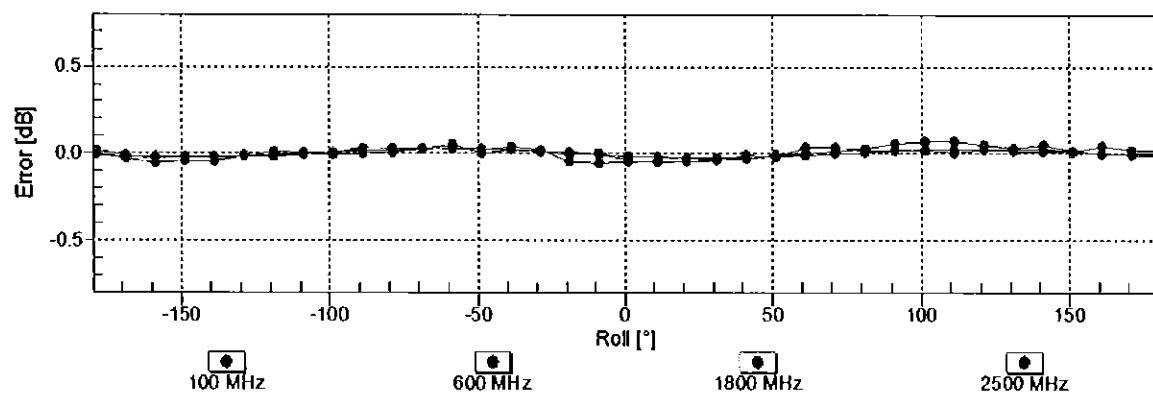
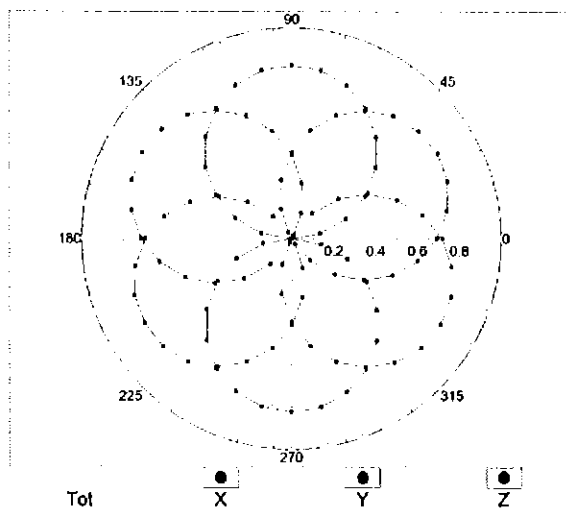
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

## Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$

f=600 MHz,TEM

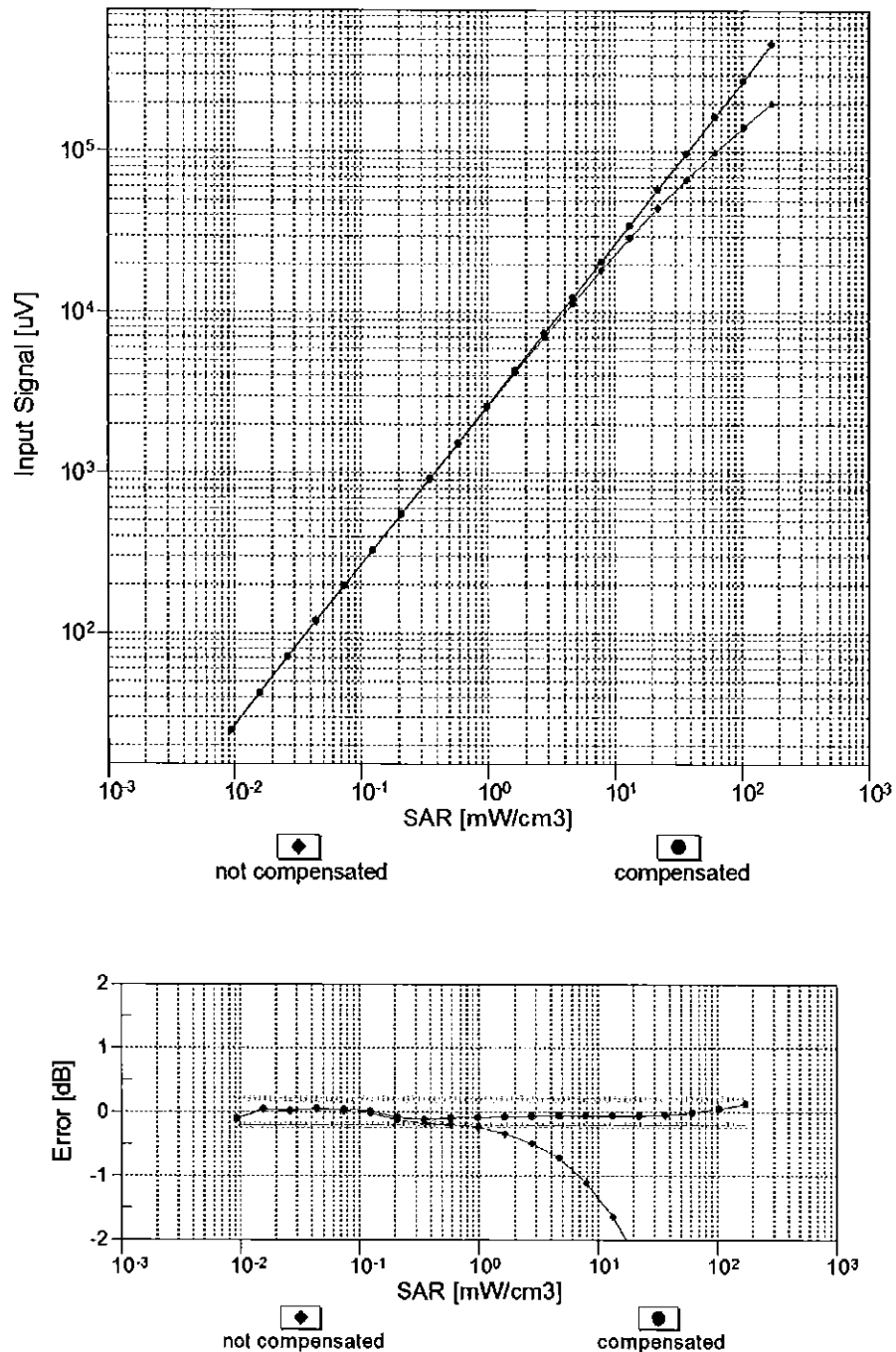


f=1800 MHz,R22



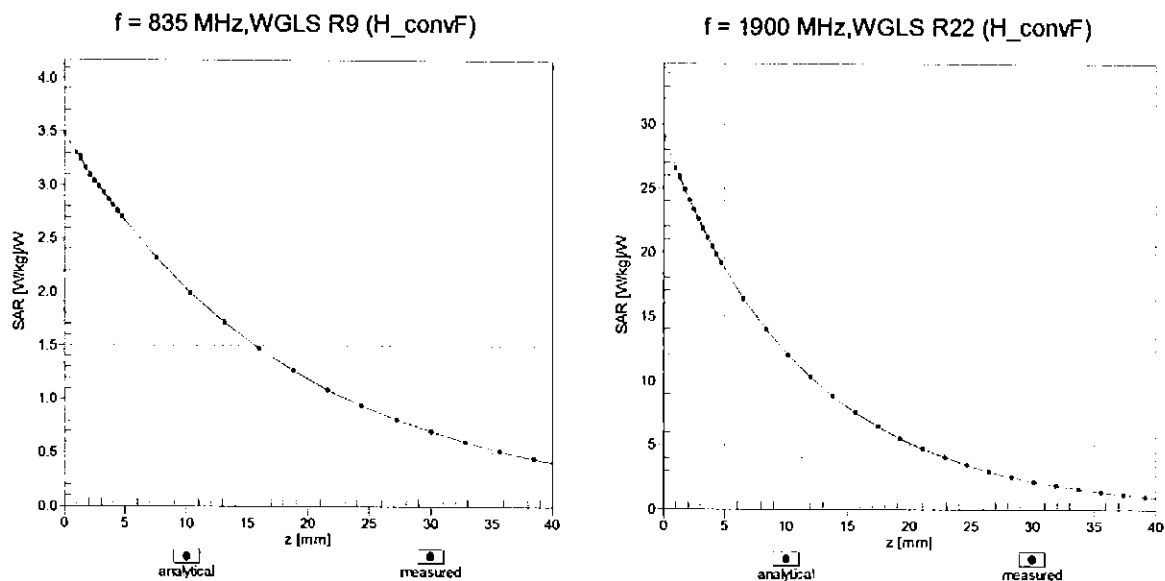
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

# Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900 \text{ MHz}$ )



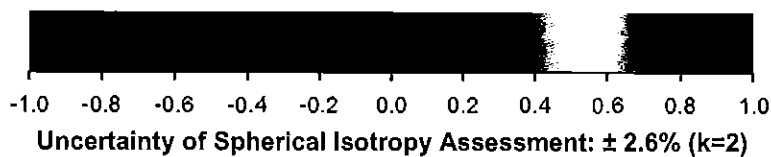
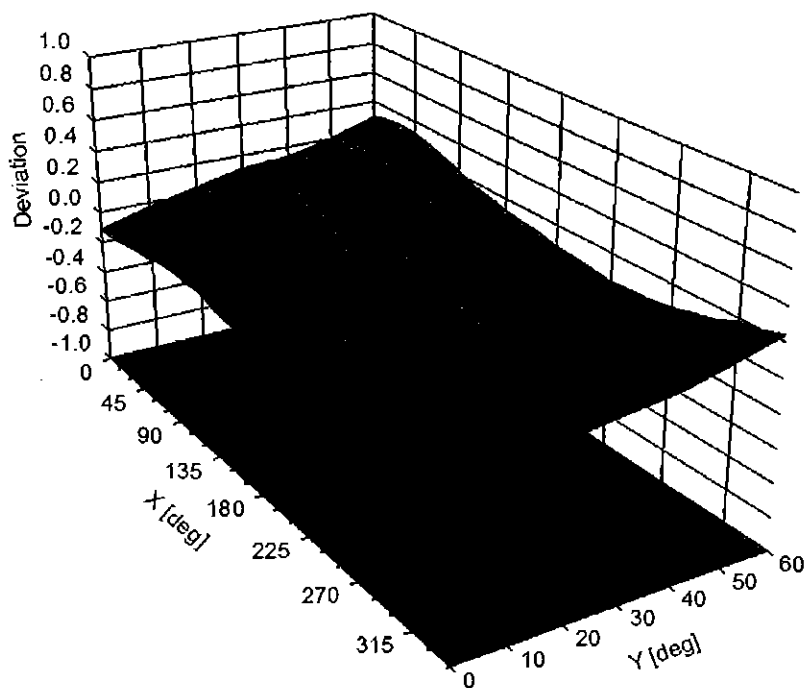
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

Error ( $\phi, \theta$ ),  $f = 900 \text{ MHz}$



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 1.2        |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Appendix: Modulation Calibration Parameters**

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\sqrt{\mu V}$ | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|------------------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00                   | 1.00  | 0.00    | 130.7    | $\pm 3.5 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 146.7    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 132.5    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.07    | 65.38                  | 9.86  | 10.00   | 20.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.71    | 64.71                  | 9.07  |         | 20.0     |                                  |
|               |                                               | Z | 3.44    | 71.14                  | 12.92 |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.05    | 67.82                  | 15.62 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.11    | 68.91                  | 16.28 |         | 150.0    |                                  |
|               |                                               | Z | 1.02    | 66.59                  | 14.94 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.16    | 63.70                  | 15.28 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.18    | 64.10                  | 15.65 |         | 150.0    |                                  |
|               |                                               | Z | 1.17    | 63.41                  | 15.09 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.78    | 66.61                  | 17.05 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.80    | 66.74                  | 17.21 |         | 150.0    |                                  |
|               |                                               | Z | 4.93    | 66.52                  | 17.11 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 100.00  | 111.37                 | 25.72 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 111.58                 | 25.35 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 117.02                 | 28.59 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 100.00  | 110.83                 | 25.53 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 1707.76 | 142.54                 | 31.32 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 116.46                 | 28.39 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 111.84                 | 24.81 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 114.48                 | 25.68 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 118.35                 | 28.09 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 3.46    | 65.17                  | 23.20 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.27    | 82.06                  | 33.95 |         | 50.0     |                                  |
|               |                                               | Z | 3.61    | 65.78                  | 23.81 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 6.19    | 83.69                  | 29.67 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 7.27    | 90.43                  | 33.46 |         | 60.0     |                                  |
|               |                                               | Z | 7.46    | 87.49                  | 31.34 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 114.23                 | 25.06 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 119.65                 | 27.19 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 121.09                 | 28.48 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 118.39                 | 26.12 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 127.35                 | 29.74 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 125.00                 | 29.42 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 4.31    | 75.70                  | 25.15 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.62    | 78.76                  | 27.21 |         | 80.0     |                                  |
|               |                                               | Z | 5.10    | 78.80                  | 26.60 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 110.42                 | 23.70 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 113.76                 | 24.95 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 117.44                 | 27.22 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 118.50                 | 24.77 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 132.66                 | 30.37 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 126.29                 | 28.44 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 133.47 | 29.67 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 157.48 | 38.89 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 136.04 | 31.29 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 8.66   | 91.15  | 24.16 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 61.92  | 124.81 | 33.89 |       | 70.0  |         |
|           |                                                     | Z | 18.44  | 105.53 | 29.79 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 2.66   | 76.47  | 17.66 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.91   | 85.76  | 21.28 |       | 100.0 |         |
|           |                                                     | Z | 3.14   | 79.12  | 19.77 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 1.87   | 72.76  | 15.96 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.71   | 78.22  | 18.36 |       | 100.0 |         |
|           |                                                     | Z | 2.01   | 73.50  | 17.25 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 12.89  | 97.56  | 26.18 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 133.04 | 35.90 |       | 70.0  |         |
|           |                                                     | Z | 33.52  | 115.95 | 32.67 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 2.40   | 75.20  | 17.16 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.17   | 83.65  | 20.57 |       | 100.0 |         |
|           |                                                     | Z | 2.91   | 78.15  | 19.38 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 1.89   | 73.11  | 16.24 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.73   | 78.67  | 18.67 |       | 100.0 |         |
|           |                                                     | Z | 2.03   | 73.85  | 17.51 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 1.93   | 73.30  | 15.79 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.16   | 74.82  | 16.50 |       | 150.0 |         |
|           |                                                     | Z | 1.82   | 71.39  | 15.74 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00 | 108.18 | 23.51 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 108.75 | 23.44 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 113.77 | 26.32 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00   | 97.63  | 1.20  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 97.90  | 0.75  |       | 150.0 |         |
|           |                                                     | Z | 0.00   | 95.09  | 2.63  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 29.38  | 92.85  | 22.01 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 106.19 | 24.33 |       | 25.0  |         |
|           |                                                     | Z | 100.00 | 113.54 | 28.60 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 92.32  | 108.50 | 25.07 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 108.13 | 24.14 |       | 40.0  |         |
|           |                                                     | Z | 100.00 | 114.66 | 27.93 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 28.80  | 103.53 | 27.62 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 125.87 | 33.73 |       | 50.0  |         |
|           |                                                     | Z | 90.56  | 125.80 | 34.77 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 3.55   | 72.15  | 22.79 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.72   | 74.09  | 24.21 |       | 100.0 |         |
|           |                                                     | Z | 4.11   | 74.59  | 23.97 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.17   | 64.52  | 15.76 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.20   | 65.09  | 16.25 |       | 110.0 |         |
|           |                                                     | Z | 1.19   | 64.38  | 15.68 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 5.38   | 97.28  | 26.54 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 94.12  | 145.74 | 39.06 |       | 110.0 |         |
|           |                                                     | Z | 7.25   | 100.99 | 27.69 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 2.03 | 75.84 | 20.79 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 2.53 | 80.86 | 23.32 |      | 110.0 |         |
|           |                                                | Z | 2.46 | 78.49 | 22.05 |      | 110.0 |         |
| 10062-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.60 | 66.68 | 16.54 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.62 | 66.77 | 16.65 |      | 100.0 |         |
|           |                                                | Z | 4.74 | 66.54 | 16.54 |      | 100.0 |         |
| 10063-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.61 | 66.74 | 16.62 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.63 | 66.85 | 16.75 |      | 100.0 |         |
|           |                                                | Z | 4.75 | 66.63 | 16.64 |      | 100.0 |         |
| 10064-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.88 | 66.97 | 16.83 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.90 | 67.08 | 16.96 |      | 100.0 |         |
|           |                                                | Z | 5.06 | 66.93 | 16.89 |      | 100.0 |         |
| 10065-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.74 | 66.82 | 16.90 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.76 | 66.95 | 17.05 |      | 100.0 |         |
|           |                                                | Z | 4.91 | 66.81 | 16.98 |      | 100.0 |         |
| 10066-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.74 | 66.80 | 17.04 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.77 | 66.94 | 17.21 |      | 100.0 |         |
|           |                                                | Z | 4.93 | 66.83 | 17.15 |      | 100.0 |         |
| 10067-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.03 | 66.98 | 17.46 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.05 | 67.14 | 17.66 |      | 100.0 |         |
|           |                                                | Z | 5.21 | 66.94 | 17.57 |      | 100.0 |         |
| 10068-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.05 | 66.91 | 17.63 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.07 | 67.08 | 17.84 |      | 100.0 |         |
|           |                                                | Z | 5.27 | 67.04 | 17.82 |      | 100.0 |         |
| 10069-CAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.12 | 66.93 | 17.81 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.15 | 67.10 | 18.04 |      | 100.0 |         |
|           |                                                | Z | 5.34 | 66.99 | 17.99 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.86 | 66.65 | 17.32 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.89 | 66.79 | 17.50 |      | 100.0 |         |
|           |                                                | Z | 5.01 | 66.60 | 17.41 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.82 | 66.89 | 17.50 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.84 | 67.05 | 17.70 |      | 100.0 |         |
|           |                                                | Z | 4.99 | 66.92 | 17.63 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.86 | 67.00 | 17.79 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.89 | 67.17 | 18.02 |      | 100.0 |         |
|           |                                                | Z | 5.04 | 67.03 | 17.94 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.85 | 66.87 | 17.91 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.86 | 67.04 | 18.15 |      | 100.0 |         |
|           |                                                | Z | 5.01 | 66.88 | 18.08 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.86 | 66.89 | 18.16 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.87 | 67.06 | 18.42 |      | 90.0  |         |
|           |                                                | Z | 5.04 | 67.00 | 18.40 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.88 | 66.70 | 18.29 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.89 | 66.85 | 18.55 |      | 90.0  |         |
|           |                                                | Z | 5.03 | 66.71 | 18.47 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.91 | 66.76 | 18.38 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.91 | 66.91 | 18.65 |      | 90.0  |         |
|           |                                                | Z | 5.05 | 66.76 | 18.56 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.83   | 66.43  | 12.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.90   | 67.46  | 13.02 |      | 150.0 |         |
|           |                                                     | Z | 0.87   | 65.72  | 12.74 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.60   | 60.00  | 4.03  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 1.74   | 63.67  | 4.99  |      | 80.0  |         |
|           |                                                     | Z | 0.50   | 57.10  | 2.51  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 111.84 | 24.82 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 114.47 | 25.69 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 118.36 | 28.12 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.87   | 68.36  | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.92   | 68.79  | 16.27 |      | 150.0 |         |
|           |                                                     | Z | 1.83   | 67.16  | 15.53 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.83   | 68.30  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.88   | 68.76  | 16.25 |      | 150.0 |         |
|           |                                                     | Z | 1.79   | 67.10  | 15.49 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 6.23   | 83.81  | 29.72 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 7.34   | 90.66  | 33.54 |      | 60.0  |         |
|           |                                                     | Z | 7.51   | 87.64  | 31.39 |      | 60.0  |         |
| 10100-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.10   | 70.42  | 16.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.17   | 70.79  | 17.14 |      | 150.0 |         |
|           |                                                     | Z | 3.14   | 69.95  | 16.56 |      | 150.0 |         |
| 10101-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.21   | 67.53  | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.24   | 67.71  | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 3.28   | 67.33  | 15.89 |      | 150.0 |         |
| 10102-CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.31   | 67.53  | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.34   | 67.67  | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 3.39   | 67.31  | 16.00 |      | 150.0 |         |
| 10103-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 5.23   | 73.47  | 19.72 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.84   | 75.95  | 21.01 |      | 65.0  |         |
|           |                                                     | Z | 5.88   | 74.83  | 20.39 |      | 65.0  |         |
| 10104-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 5.46   | 71.98  | 19.77 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.63   | 73.01  | 20.49 |      | 65.0  |         |
|           |                                                     | Z | 6.00   | 73.07  | 20.39 |      | 65.0  |         |
| 10105-CAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 5.42   | 71.61  | 19.91 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.43   | 72.06  | 20.36 |      | 65.0  |         |
|           |                                                     | Z | 5.47   | 71.05  | 19.77 |      | 65.0  |         |
| 10108-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.70   | 69.72  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.76   | 70.10  | 16.99 |      | 150.0 |         |
|           |                                                     | Z | 2.75   | 69.19  | 16.39 |      | 150.0 |         |
| 10109-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.86   | 67.48  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.89   | 67.67  | 16.11 |      | 150.0 |         |
|           |                                                     | Z | 2.94   | 67.16  | 15.80 |      | 150.0 |         |
| 10110-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.18   | 68.93  | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.24   | 69.40  | 16.63 |      | 150.0 |         |
|           |                                                     | Z | 2.24   | 68.24  | 15.99 |      | 150.0 |         |
| 10111-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.61   | 68.71  | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.63   | 68.84  | 16.47 |      | 150.0 |         |
|           |                                                     | Z | 2.65   | 67.91  | 16.10 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAD | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 2.99 | 67.52 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.01 | 67.67 | 16.15 |      | 150.0 |         |
|           |                                                | Z | 3.06 | 67.16 | 15.86 |      | 150.0 |         |
| 10113-CAD | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.77 | 68.89 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.78 | 68.97 | 16.58 |      | 150.0 |         |
|           |                                                | Z | 2.81 | 68.06 | 16.24 |      | 150.0 |         |
| 10114-CAB | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.09 | 67.23 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.10 | 67.28 | 16.60 |      | 150.0 |         |
|           |                                                | Z | 5.19 | 67.11 | 16.46 |      | 150.0 |         |
| 10115-CAB | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.34 | 67.29 | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.35 | 67.33 | 16.63 |      | 150.0 |         |
|           |                                                | Z | 5.51 | 67.33 | 16.58 |      | 150.0 |         |
| 10116-CAB | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.18 | 67.42 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.19 | 67.47 | 16.62 |      | 150.0 |         |
|           |                                                | Z | 5.30 | 67.34 | 16.50 |      | 150.0 |         |
| 10117-CAB | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.06 | 67.11 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.07 | 67.16 | 16.56 |      | 150.0 |         |
|           |                                                | Z | 5.16 | 66.99 | 16.42 |      | 150.0 |         |
| 10118-CAB | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.42 | 67.49 | 16.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.44 | 67.54 | 16.74 |      | 150.0 |         |
|           |                                                | Z | 5.60 | 67.55 | 16.70 |      | 150.0 |         |
| 10119-CAB | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.16 | 67.38 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.17 | 67.43 | 16.62 |      | 150.0 |         |
|           |                                                | Z | 5.27 | 67.27 | 16.48 |      | 150.0 |         |
| 10140-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.34 | 67.53 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.37 | 67.68 | 16.18 |      | 150.0 |         |
|           |                                                | Z | 3.42 | 67.31 | 15.91 |      | 150.0 |         |
| 10141-CAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.47 | 67.67 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.49 | 67.79 | 16.35 |      | 150.0 |         |
|           |                                                | Z | 3.55 | 67.42 | 16.09 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 1.97 | 69.09 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.03 | 69.63 | 16.28 |      | 150.0 |         |
|           |                                                | Z | 2.02 | 68.20 | 15.69 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.49 | 69.65 | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.52 | 69.83 | 16.12 |      | 150.0 |         |
|           |                                                | Z | 2.51 | 68.62 | 15.86 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.16 | 66.67 | 13.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.21 | 66.99 | 14.22 |      | 150.0 |         |
|           |                                                | Z | 2.30 | 66.43 | 14.30 |      | 150.0 |         |
| 10145-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.07 | 64.11 | 10.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.11 | 64.57 | 11.01 |      | 150.0 |         |
|           |                                                | Z | 1.31 | 65.51 | 12.40 |      | 150.0 |         |
| 10146-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 1.34 | 62.65 | 9.02  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.43 | 63.27 | 9.42  |      | 150.0 |         |
|           |                                                | Z | 2.01 | 66.35 | 12.18 |      | 150.0 |         |
| 10147-CAD | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 1.45 | 63.47 | 9.57  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.57 | 64.27 | 10.06 |      | 150.0 |         |
|           |                                                | Z | 2.34 | 68.34 | 13.28 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.87 | 67.55 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.90 | 67.73 | 16.15 |      | 150.0 |         |
|           |                                            | Z | 2.95 | 67.22 | 15.84 |      | 150.0 |         |
| 10150-CAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.00 | 67.58 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.02 | 67.73 | 16.20 |      | 150.0 |         |
|           |                                            | Z | 3.07 | 67.21 | 15.90 |      | 150.0 |         |
| 10151-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 5.65 | 76.57 | 21.08 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.17 | 78.83 | 22.29 |      | 65.0  |         |
|           |                                            | Z | 6.35 | 77.82 | 21.74 |      | 65.0  |         |
| 10152-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 4.98 | 71.84 | 19.37 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.18 | 73.09 | 20.20 |      | 65.0  |         |
|           |                                            | Z | 5.53 | 73.00 | 20.11 |      | 65.0  |         |
| 10153-CAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 5.35 | 72.93 | 20.23 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.53 | 74.06 | 20.99 |      | 65.0  |         |
|           |                                            | Z | 5.88 | 73.94 | 20.90 |      | 65.0  |         |
| 10154-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.24 | 69.40 | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.29 | 69.81 | 16.88 |      | 150.0 |         |
|           |                                            | Z | 2.29 | 68.69 | 16.27 |      | 150.0 |         |
| 10155-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.62 | 68.74 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.64 | 68.87 | 16.49 |      | 150.0 |         |
|           |                                            | Z | 2.65 | 67.91 | 16.11 |      | 150.0 |         |
| 10156-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.81 | 69.21 | 15.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.88 | 69.80 | 16.04 |      | 150.0 |         |
|           |                                            | Z | 1.87 | 68.31 | 15.53 |      | 150.0 |         |
| 10157-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.01 | 67.27 | 13.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.06 | 67.66 | 14.24 |      | 150.0 |         |
|           |                                            | Z | 2.13 | 67.00 | 14.37 |      | 150.0 |         |
| 10158-CAD | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.78 | 68.97 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.79 | 69.05 | 16.63 |      | 150.0 |         |
|           |                                            | Z | 2.81 | 68.12 | 16.28 |      | 150.0 |         |
| 10159-CAD | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.12 | 67.76 | 14.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.17 | 68.10 | 14.50 |      | 150.0 |         |
|           |                                            | Z | 2.25 | 67.49 | 14.68 |      | 150.0 |         |
| 10160-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.73 | 68.96 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 69.27 | 16.76 |      | 150.0 |         |
|           |                                            | Z | 2.78 | 68.34 | 16.22 |      | 150.0 |         |
| 10161-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.89 | 67.56 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.92 | 67.72 | 16.12 |      | 150.0 |         |
|           |                                            | Z | 2.97 | 67.14 | 15.84 |      | 150.0 |         |
| 10162-CAC | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.00 | 67.76 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.03 | 67.89 | 16.24 |      | 150.0 |         |
|           |                                            | Z | 3.08 | 67.27 | 15.94 |      | 150.0 |         |
| 10166-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.29 | 68.55 | 18.62 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.39 | 69.14 | 19.00 |      | 150.0 |         |
|           |                                            | Z | 3.56 | 68.77 | 18.74 |      | 150.0 |         |
| 10167-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 3.85 | 70.83 | 18.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.06 | 71.87 | 19.39 |      | 150.0 |         |
|           |                                            | Z | 4.27 | 71.19 | 19.04 |      | 150.0 |         |

|           |                                            |   |       |       |       |      |       |         |
|-----------|--------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10168-CAD | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.31  | 73.34 | 20.36 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.51  | 74.19 | 20.77 |      | 150.0 |         |
|           |                                            | Z | 4.72  | 73.40 | 20.38 |      | 150.0 |         |
| 10169-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.65  | 67.07 | 17.95 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.76  | 67.90 | 18.46 |      | 150.0 |         |
|           |                                            | Z | 2.95  | 68.18 | 18.47 |      | 150.0 |         |
| 10170-CAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 3.35  | 71.83 | 19.98 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.58  | 73.08 | 20.56 |      | 150.0 |         |
|           |                                            | Z | 3.90  | 73.37 | 20.58 |      | 150.0 |         |
| 10171-AAC | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.80  | 68.11 | 17.24 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.01  | 69.49 | 17.99 |      | 150.0 |         |
|           |                                            | Z | 3.23  | 69.44 | 17.85 |      | 150.0 |         |
| 10172-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.65  | 76.31 | 22.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.48  | 85.89 | 27.40 |      | 65.0  |         |
|           |                                            | Z | 5.55  | 83.03 | 25.87 |      | 65.0  |         |
| 10173-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 6.66  | 85.15 | 24.55 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 10.56 | 95.03 | 28.43 |      | 65.0  |         |
|           |                                            | Z | 12.26 | 94.72 | 28.10 |      | 65.0  |         |
| 10174-CAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 4.93  | 79.32 | 21.92 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.98  | 90.91 | 26.48 |      | 65.0  |         |
|           |                                            | Z | 8.81  | 87.78 | 25.30 |      | 65.0  |         |
| 10175-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.62  | 66.79 | 17.70 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.73  | 67.64 | 18.24 |      | 150.0 |         |
|           |                                            | Z | 2.91  | 67.87 | 18.21 |      | 150.0 |         |
| 10176-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 3.35  | 71.86 | 19.99 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.58  | 73.10 | 20.58 |      | 150.0 |         |
|           |                                            | Z | 3.90  | 73.39 | 20.59 |      | 150.0 |         |
| 10177-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.64  | 66.92 | 17.79 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.75  | 67.76 | 18.31 |      | 150.0 |         |
|           |                                            | Z | 2.94  | 68.03 | 18.32 |      | 150.0 |         |
| 10178-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 3.33  | 71.68 | 19.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.56  | 72.95 | 20.49 |      | 150.0 |         |
|           |                                            | Z | 3.86  | 73.15 | 20.45 |      | 150.0 |         |
| 10179-CAD | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 3.04  | 69.83 | 18.46 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.27  | 71.21 | 19.16 |      | 150.0 |         |
|           |                                            | Z | 3.53  | 71.24 | 19.06 |      | 150.0 |         |
| 10180-CAD | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 2.79  | 68.06 | 17.20 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.00  | 69.44 | 17.95 |      | 150.0 |         |
|           |                                            | Z | 3.23  | 69.37 | 17.80 |      | 150.0 |         |
| 10181-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.64  | 66.91 | 17.79 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.74  | 67.75 | 18.31 |      | 150.0 |         |
|           |                                            | Z | 2.93  | 68.01 | 18.31 |      | 150.0 |         |
| 10182-CAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 3.32  | 71.66 | 19.87 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.55  | 72.93 | 20.48 |      | 150.0 |         |
|           |                                            | Z | 3.85  | 73.13 | 20.44 |      | 150.0 |         |
| 10183-AAB | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 2.79  | 68.04 | 17.19 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.00  | 69.42 | 17.94 |      | 150.0 |         |
|           |                                            | Z | 3.22  | 69.35 | 17.79 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.65 | 66.95 | 17.81 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.75 | 67.79 | 18.33 |      | 150.0 |         |
|           |                                               | Z | 2.95 | 68.05 | 18.33 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 3.34 | 71.72 | 19.91 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.57 | 72.99 | 20.51 |      | 150.0 |         |
|           |                                               | Z | 3.87 | 73.20 | 20.48 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 2.80 | 68.09 | 17.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.01 | 69.48 | 17.97 |      | 150.0 |         |
|           |                                               | Z | 3.23 | 69.41 | 17.82 |      | 150.0 |         |
| 10187-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.66 | 67.00 | 17.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.76 | 67.84 | 18.40 |      | 150.0 |         |
|           |                                               | Z | 2.95 | 68.09 | 18.39 |      | 150.0 |         |
| 10188-CAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 3.43 | 72.31 | 20.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.66 | 73.53 | 20.84 |      | 150.0 |         |
|           |                                               | Z | 4.00 | 73.86 | 20.87 |      | 150.0 |         |
| 10189-AAD | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 2.85 | 68.45 | 17.48 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.07 | 69.84 | 18.22 |      | 150.0 |         |
|           |                                               | Z | 3.30 | 69.81 | 18.09 |      | 150.0 |         |
| 10193-CAB | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.48 | 66.73 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.49 | 66.78 | 16.30 |      | 150.0 |         |
|           |                                               | Z | 4.58 | 66.49 | 16.16 |      | 150.0 |         |
| 10194-CAB | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.63 | 67.01 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.65 | 67.06 | 16.43 |      | 150.0 |         |
|           |                                               | Z | 4.76 | 66.82 | 16.28 |      | 150.0 |         |
| 10195-CAB | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.67 | 67.04 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.69 | 67.09 | 16.44 |      | 150.0 |         |
|           |                                               | Z | 4.80 | 66.85 | 16.30 |      | 150.0 |         |
| 10196-CAB | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.47 | 66.77 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.48 | 66.82 | 16.30 |      | 150.0 |         |
|           |                                               | Z | 4.59 | 66.56 | 16.19 |      | 150.0 |         |
| 10197-CAB | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.64 | 67.02 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.66 | 67.08 | 16.44 |      | 150.0 |         |
|           |                                               | Z | 4.78 | 66.84 | 16.30 |      | 150.0 |         |
| 10198-CAB | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.67 | 67.05 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.68 | 67.10 | 16.45 |      | 150.0 |         |
|           |                                               | Z | 4.81 | 66.86 | 16.31 |      | 150.0 |         |
| 10219-CAB | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.42 | 66.79 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.44 | 66.84 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.54 | 66.57 | 16.15 |      | 150.0 |         |
| 10220-CAB | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.64 | 66.99 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.65 | 67.04 | 16.42 |      | 150.0 |         |
|           |                                               | Z | 4.77 | 66.82 | 16.29 |      | 150.0 |         |
| 10221-CAB | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.68 | 66.98 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.69 | 67.03 | 16.44 |      | 150.0 |         |
|           |                                               | Z | 4.81 | 66.80 | 16.30 |      | 150.0 |         |
| 10222-CAB | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.03 | 67.11 | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.04 | 67.15 | 16.55 |      | 150.0 |         |
|           |                                               | Z | 5.14 | 67.00 | 16.41 |      | 150.0 |         |

|           |                                           |   |       |       |       |      |       |         |
|-----------|-------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10223-CAB | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.33  | 67.33 | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.34  | 67.38 | 16.68 |      | 150.0 |         |
|           |                                           | Z | 5.45  | 67.21 | 16.54 |      | 150.0 |         |
| 10224-CAB | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.07  | 67.22 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.09  | 67.26 | 16.53 |      | 150.0 |         |
|           |                                           | Z | 5.18  | 67.11 | 16.40 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.76  | 66.33 | 15.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.78  | 66.46 | 15.44 |      | 150.0 |         |
|           |                                           | Z | 2.85  | 65.93 | 15.34 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 7.05  | 86.26 | 25.03 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 11.33 | 96.43 | 28.97 |      | 65.0  |         |
|           |                                           | Z | 13.18 | 96.17 | 28.66 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 7.07  | 85.23 | 24.04 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 11.45 | 95.09 | 27.83 |      | 65.0  |         |
|           |                                           | Z | 12.76 | 94.16 | 27.40 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 4.84  | 82.15 | 25.37 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.17  | 88.64 | 28.46 |      | 65.0  |         |
|           |                                           | Z | 7.76  | 90.12 | 28.51 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 6.71  | 85.26 | 24.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 10.65 | 95.13 | 28.47 |      | 65.0  |         |
|           |                                           | Z | 12.36 | 94.84 | 28.14 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 6.68  | 84.20 | 23.61 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 10.65 | 93.73 | 27.33 |      | 65.0  |         |
|           |                                           | Z | 11.94 | 92.89 | 26.92 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 4.67  | 81.40 | 24.99 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.94  | 87.77 | 28.07 |      | 65.0  |         |
|           |                                           | Z | 7.43  | 89.17 | 28.10 |      | 65.0  |         |
| 10232-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 6.69  | 85.24 | 24.58 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 10.63 | 95.12 | 28.47 |      | 65.0  |         |
|           |                                           | Z | 12.34 | 94.82 | 28.14 |      | 65.0  |         |
| 10233-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 6.66  | 84.17 | 23.60 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 10.62 | 93.69 | 27.32 |      | 65.0  |         |
|           |                                           | Z | 11.91 | 92.86 | 26.91 |      | 65.0  |         |
| 10234-CAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 4.54  | 80.75 | 24.63 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.76  | 87.05 | 27.69 |      | 65.0  |         |
|           |                                           | Z | 7.17  | 88.32 | 27.68 |      | 65.0  |         |
| 10235-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 6.69  | 85.26 | 24.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 10.64 | 95.16 | 28.48 |      | 65.0  |         |
|           |                                           | Z | 12.35 | 94.85 | 28.15 |      | 65.0  |         |
| 10236-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 6.73  | 84.30 | 23.64 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 10.78 | 93.91 | 27.38 |      | 65.0  |         |
|           |                                           | Z | 12.05 | 93.03 | 26.96 |      | 65.0  |         |
| 10237-CAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 4.67  | 81.42 | 25.00 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.94  | 87.83 | 28.10 |      | 65.0  |         |
|           |                                           | Z | 7.43  | 89.21 | 28.12 |      | 65.0  |         |
| 10238-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 6.68  | 85.21 | 24.57 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 10.60 | 95.09 | 28.46 |      | 65.0  |         |
|           |                                           | Z | 12.31 | 94.79 | 28.13 |      | 65.0  |         |

|           |                                            |   |       |       |       |      |      |         |
|-----------|--------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10239-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 6.64  | 84.13 | 23.58 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.57 | 93.64 | 27.30 |      | 65.0 |         |
|           |                                            | Z | 11.87 | 92.82 | 26.90 |      | 65.0 |         |
| 10240-CAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 4.66  | 81.38 | 24.99 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.92  | 87.78 | 28.08 |      | 65.0 |         |
|           |                                            | Z | 7.41  | 89.16 | 28.10 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 6.49  | 77.69 | 23.88 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.06  | 80.22 | 25.34 |      | 65.0 |         |
|           |                                            | Z | 7.33  | 78.75 | 24.61 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.69  | 74.96 | 22.63 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.72  | 79.20 | 24.84 |      | 65.0 |         |
|           |                                            | Z | 6.48  | 76.10 | 23.39 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 5.22  | 73.93 | 23.04 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.37  | 75.23 | 24.06 |      | 65.0 |         |
|           |                                            | Z | 5.30  | 72.76 | 22.72 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 4.03  | 70.70 | 15.63 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.63  | 73.27 | 17.01 |      | 65.0 |         |
|           |                                            | Z | 5.80  | 76.12 | 19.17 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 3.94  | 70.12 | 15.32 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.47  | 72.48 | 16.60 |      | 65.0 |         |
|           |                                            | Z | 5.67  | 75.49 | 18.85 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 4.17  | 75.16 | 18.15 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.29  | 79.64 | 20.23 |      | 65.0 |         |
|           |                                            | Z | 5.81  | 80.17 | 21.10 |      | 65.0 |         |
| 10247-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 4.10  | 71.58 | 17.29 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.43  | 73.43 | 18.37 |      | 65.0 |         |
|           |                                            | Z | 4.92  | 74.07 | 19.21 |      | 65.0 |         |
| 10248-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 4.07  | 70.96 | 16.98 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.37  | 72.65 | 17.99 |      | 65.0 |         |
|           |                                            | Z | 4.90  | 73.42 | 18.88 |      | 65.0 |         |
| 10249-CAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 5.33  | 79.24 | 20.92 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.73  | 84.01 | 23.05 |      | 65.0 |         |
|           |                                            | Z | 6.62  | 82.34 | 22.76 |      | 65.0 |         |
| 10250-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 4.99  | 74.32 | 20.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.24  | 75.79 | 21.30 |      | 65.0 |         |
|           |                                            | Z | 5.59  | 75.60 | 21.35 |      | 65.0 |         |
| 10251-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 4.75  | 72.14 | 19.02 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.99  | 73.56 | 19.92 |      | 65.0 |         |
|           |                                            | Z | 5.35  | 73.44 | 20.02 |      | 65.0 |         |
| 10252-CAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 5.62  | 79.05 | 22.01 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.48  | 82.42 | 23.65 |      | 65.0 |         |
|           |                                            | Z | 6.49  | 80.72 | 22.96 |      | 65.0 |         |
| 10253-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 4.91  | 71.43 | 19.12 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.09  | 72.60 | 19.93 |      | 65.0 |         |
|           |                                            | Z | 5.40  | 72.41 | 19.86 |      | 65.0 |         |
| 10254-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 5.23  | 72.40 | 19.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.41  | 73.49 | 20.63 |      | 65.0 |         |
|           |                                            | Z | 5.73  | 73.30 | 20.57 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 5.37 | 75.82 | 20.95 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.81 | 77.90 | 22.11 |      | 65.0 |         |
|           |                                             | Z | 5.98 | 76.90 | 21.60 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 2.95 | 66.44 | 12.43 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.25 | 68.14 | 13.47 |      | 65.0 |         |
|           |                                             | Z | 4.63 | 72.57 | 16.66 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 2.90 | 65.89 | 12.05 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.14 | 67.36 | 12.98 |      | 65.0 |         |
|           |                                             | Z | 4.49 | 71.73 | 16.18 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 2.90 | 69.51 | 14.64 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.44 | 72.54 | 16.25 |      | 65.0 |         |
|           |                                             | Z | 4.52 | 75.89 | 18.60 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 4.46 | 72.72 | 18.47 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.78 | 74.47 | 19.50 |      | 65.0 |         |
|           |                                             | Z | 5.19 | 74.62 | 19.97 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 4.49 | 72.43 | 18.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.79 | 74.08 | 19.32 |      | 65.0 |         |
|           |                                             | Z | 5.22 | 74.34 | 19.84 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 5.17 | 78.27 | 21.02 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.16 | 82.12 | 22.85 |      | 65.0 |         |
|           |                                             | Z | 6.14 | 80.53 | 22.44 |      | 65.0 |         |
| 10262-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 4.98 | 74.25 | 20.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.23 | 75.73 | 21.26 |      | 65.0 |         |
|           |                                             | Z | 5.58 | 75.55 | 21.31 |      | 65.0 |         |
| 10263-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 4.74 | 72.12 | 19.01 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.98 | 73.53 | 19.91 |      | 65.0 |         |
|           |                                             | Z | 5.34 | 73.42 | 20.01 |      | 65.0 |         |
| 10264-CAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 5.56 | 78.83 | 21.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.41 | 82.18 | 23.54 |      | 65.0 |         |
|           |                                             | Z | 6.42 | 80.51 | 22.86 |      | 65.0 |         |
| 10265-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 4.98 | 71.84 | 19.37 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.18 | 73.09 | 20.20 |      | 65.0 |         |
|           |                                             | Z | 5.53 | 73.00 | 20.12 |      | 65.0 |         |
| 10266-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 5.34 | 72.91 | 20.22 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.53 | 74.04 | 20.98 |      | 65.0 |         |
|           |                                             | Z | 5.88 | 73.92 | 20.89 |      | 65.0 |         |
| 10267-CAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 5.64 | 76.53 | 21.06 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.16 | 78.78 | 22.27 |      | 65.0 |         |
|           |                                             | Z | 6.34 | 77.78 | 21.72 |      | 65.0 |         |
| 10268-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 5.63 | 71.94 | 19.85 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.78 | 72.88 | 20.51 |      | 65.0 |         |
|           |                                             | Z | 6.14 | 72.88 | 20.41 |      | 65.0 |         |
| 10269-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 5.64 | 71.57 | 19.72 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.77 | 72.45 | 20.36 |      | 65.0 |         |
|           |                                             | Z | 6.12 | 72.44 | 20.27 |      | 65.0 |         |
| 10270-CAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 5.66 | 74.09 | 20.17 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.94 | 75.48 | 21.01 |      | 65.0 |         |
|           |                                             | Z | 6.22 | 75.05 | 20.69 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.58  | 66.84 | 15.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.61  | 67.05 | 15.49 |      | 150.0 |         |
|           |                                                                    | Z | 2.61  | 66.19 | 15.19 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.62  | 68.33 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.68  | 69.01 | 16.23 |      | 150.0 |         |
|           |                                                                    | Z | 1.61  | 67.33 | 15.34 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.71  | 60.26 | 5.85  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.46  | 60.00 | 5.35  |      | 50.0  |         |
|           |                                                                    | Z | 2.08  | 61.87 | 7.57  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 3.48  | 68.77 | 13.21 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 3.86  | 71.42 | 14.38 |      | 50.0  |         |
|           |                                                                    | Z | 7.61  | 81.06 | 19.61 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 3.59  | 69.09 | 13.42 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.03  | 71.88 | 14.65 |      | 50.0  |         |
|           |                                                                    | Z | 7.80  | 81.31 | 19.76 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.38  | 68.75 | 13.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.49  | 69.81 | 14.11 |      | 150.0 |         |
|           |                                                                    | Z | 1.48  | 68.40 | 14.11 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.81  | 66.18 | 12.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.88  | 67.15 | 12.85 |      | 150.0 |         |
|           |                                                                    | Z | 0.85  | 65.51 | 12.62 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.25  | 72.63 | 15.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.48  | 75.02 | 16.70 |      | 150.0 |         |
|           |                                                                    | Z | 1.05  | 69.24 | 14.85 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 3.55  | 87.18 | 21.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 4.57  | 90.90 | 22.67 |      | 150.0 |         |
|           |                                                                    | Z | 1.55  | 74.98 | 17.80 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 10.90 | 87.79 | 24.10 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 17.38 | 97.96 | 27.91 |      | 50.0  |         |
|           |                                                                    | Z | 9.27  | 86.92 | 25.25 |      | 50.0  |         |
| 10297-AAB | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.71  | 69.84 | 16.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.77  | 70.21 | 17.06 |      | 150.0 |         |
|           |                                                                    | Z | 2.77  | 69.29 | 16.46 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.47  | 67.49 | 13.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.54  | 68.13 | 14.02 |      | 150.0 |         |
|           |                                                                    | Z | 1.61  | 67.49 | 14.26 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 1.91  | 66.04 | 11.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.08  | 67.06 | 12.49 |      | 150.0 |         |
|           |                                                                    | Z | 2.55  | 68.88 | 14.29 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.52  | 62.84 | 9.56  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.60  | 63.32 | 9.89  |      | 150.0 |         |
|           |                                                                    | Z | 2.01  | 64.97 | 11.67 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.49  | 64.94 | 17.15 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.51  | 65.12 | 17.33 |      | 50.0  |         |
|           |                                                                    | Z | 4.77  | 65.09 | 17.35 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 4.98  | 65.58 | 17.87 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.02  | 65.83 | 18.08 |      | 50.0  |         |
|           |                                                                    | Z | 5.23  | 65.61 | 18.00 |      | 50.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.72 | 65.17 | 17.66 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.76 | 65.39 | 17.86 |       | 50.0  |         |
|           |                                                                     | Z | 4.98 | 65.24 | 17.83 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.56 | 65.16 | 17.23 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.60 | 65.38 | 17.42 |       | 50.0  |         |
|           |                                                                     | Z | 4.79 | 65.14 | 17.34 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.06 | 66.26 | 18.68 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.98 | 66.05 | 18.73 |       | 35.0  |         |
|           |                                                                     | Z | 4.32 | 66.47 | 19.19 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.43 | 65.65 | 18.52 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.40 | 65.62 | 18.63 |       | 35.0  |         |
|           |                                                                     | Z | 4.69 | 65.80 | 18.88 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.31 | 65.69 | 18.43 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.27 | 65.62 | 18.52 |       | 35.0  |         |
|           |                                                                     | Z | 4.59 | 65.95 | 18.85 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.28 | 65.86 | 18.56 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.24 | 65.78 | 18.65 |       | 35.0  |         |
|           |                                                                     | Z | 4.55 | 66.08 | 18.95 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.47 | 65.79 | 18.63 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.44 | 65.78 | 18.76 |       | 35.0  |         |
|           |                                                                     | Z | 4.75 | 66.03 | 19.03 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.38 | 65.69 | 18.49 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.34 | 65.63 | 18.59 |       | 35.0  |         |
|           |                                                                     | Z | 4.64 | 65.84 | 18.85 |       | 35.0  |         |
| 10311-AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.08 | 69.08 | 16.47 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.14 | 69.40 | 16.66 |       | 150.0 |         |
|           |                                                                     | Z | 3.12 | 68.62 | 16.13 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 2.89 | 72.65 | 16.29 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 4.19 | 78.79 | 18.89 |       | 70.0  |         |
|           |                                                                     | Z | 4.02 | 76.71 | 18.18 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 5.30 | 83.78 | 23.47 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 6.55 | 89.94 | 26.15 |       | 30.0  |         |
|           |                                                                     | Z | 6.97 | 88.50 | 25.50 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.08 | 63.77 | 15.30 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.10 | 64.11 | 15.62 |       | 150.0 |         |
|           |                                                                     | Z | 1.08 | 63.32 | 14.99 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.51 | 66.68 | 16.32 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.53 | 66.78 | 16.42 |       | 150.0 |         |
|           |                                                                     | Z | 4.64 | 66.54 | 16.30 |       | 150.0 |         |
| 10317-AAB | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.51 | 66.68 | 16.32 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.53 | 66.78 | 16.42 |       | 150.0 |         |
|           |                                                                     | Z | 4.64 | 66.54 | 16.30 |       | 150.0 |         |
| 10400-AAC | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.61 | 67.03 | 16.35 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.63 | 67.11 | 16.42 |       | 150.0 |         |
|           |                                                                     | Z | 4.76 | 66.86 | 16.27 |       | 150.0 |         |
| 10401-AAC | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.34 | 67.18 | 16.51 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.36 | 67.26 | 16.59 |       | 150.0 |         |
|           |                                                                     | Z | 5.46 | 67.09 | 16.45 |       | 150.0 |         |

|           |                                                                                |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAC | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | X | 5.59   | 67.45  | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.60   | 67.49  | 16.57 |      | 150.0 |         |
|           |                                                                                | Z | 5.71   | 67.42  | 16.48 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | X | 1.38   | 68.75  | 13.54 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.49   | 69.81  | 14.11 |      | 115.0 |         |
|           |                                                                                | Z | 1.48   | 68.40  | 14.11 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | X | 1.38   | 68.75  | 13.54 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                | Y | 1.49   | 69.81  | 14.11 |      | 115.0 |         |
|           |                                                                                | Z | 1.48   | 68.40  | 14.11 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | X | 17.35  | 99.43  | 24.90 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                | Y | 63.25  | 115.82 | 28.80 |      | 100.0 |         |
|           |                                                                                | Z | 11.61  | 93.88  | 24.12 |      | 100.0 |         |
| 10410-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | X | 8.36   | 91.25  | 22.62 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                | Y | 100.00 | 127.16 | 32.13 |      | 80.0  |         |
|           |                                                                                | Z | 100.00 | 125.70 | 32.09 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | X | 1.03   | 63.22  | 14.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 1.04   | 63.49  | 15.13 |      | 150.0 |         |
|           |                                                                                | Z | 1.02   | 62.64  | 14.46 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | X | 4.48   | 66.75  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.49   | 66.81  | 16.37 |      | 150.0 |         |
|           |                                                                                | Z | 4.59   | 66.53  | 16.22 |      | 150.0 |         |
| 10417-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | X | 4.48   | 66.75  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.49   | 66.81  | 16.37 |      | 150.0 |         |
|           |                                                                                | Z | 4.59   | 66.53  | 16.22 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | X | 4.47   | 66.94  | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.48   | 67.00  | 16.41 |      | 150.0 |         |
|           |                                                                                | Z | 4.58   | 66.68  | 16.24 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | X | 4.49   | 66.88  | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.50   | 66.93  | 16.40 |      | 150.0 |         |
|           |                                                                                | Z | 4.60   | 66.63  | 16.24 |      | 150.0 |         |
| 10422-AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | X | 4.60   | 66.86  | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.61   | 66.91  | 16.41 |      | 150.0 |         |
|           |                                                                                | Z | 4.72   | 66.64  | 16.26 |      | 150.0 |         |
| 10423-AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | X | 4.74   | 67.14  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.76   | 67.20  | 16.51 |      | 150.0 |         |
|           |                                                                                | Z | 4.89   | 66.97  | 16.38 |      | 150.0 |         |
| 10424-AAA | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | X | 4.67   | 67.10  | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 4.68   | 67.15  | 16.49 |      | 150.0 |         |
|           |                                                                                | Z | 4.81   | 66.91  | 16.35 |      | 150.0 |         |
| 10425-AAA | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | X | 5.29   | 67.34  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.30   | 67.39  | 16.66 |      | 150.0 |         |
|           |                                                                                | Z | 5.42   | 67.29  | 16.55 |      | 150.0 |         |
| 10426-AAA | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | X | 5.31   | 67.43  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                | Y | 5.32   | 67.48  | 16.70 |      | 150.0 |         |
|           |                                                                                | Z | 5.43   | 67.30  | 16.56 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAA | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.30   | 67.32  | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.31   | 67.37  | 16.64 |      | 150.0 |         |
|           |                                                                | Z | 5.44   | 67.28  | 16.54 |      | 150.0 |         |
| 10430-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.41   | 72.30  | 18.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.28   | 71.61  | 18.44 |      | 150.0 |         |
|           |                                                                | Z | 4.35   | 70.84  | 18.35 |      | 150.0 |         |
| 10431-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.12   | 67.35  | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.14   | 67.43  | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 4.27   | 67.06  | 16.22 |      | 150.0 |         |
| 10432-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.43   | 67.18  | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.45   | 67.24  | 16.44 |      | 150.0 |         |
|           |                                                                | Z | 4.58   | 66.95  | 16.29 |      | 150.0 |         |
| 10433-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.69   | 67.13  | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.70   | 67.18  | 16.51 |      | 150.0 |         |
|           |                                                                | Z | 4.82   | 66.95  | 16.37 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.58   | 73.43  | 18.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.41   | 72.61  | 18.39 |      | 150.0 |         |
|           |                                                                | Z | 4.46   | 71.72  | 18.35 |      | 150.0 |         |
| 10435-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 7.84   | 90.24  | 22.26 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 126.90 | 32.00 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 125.48 | 31.98 |      | 80.0  |         |
| 10447-AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.40   | 67.35  | 15.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.42   | 67.47  | 15.52 |      | 150.0 |         |
|           |                                                                | Z | 3.56   | 67.03  | 15.56 |      | 150.0 |         |
| 10448-AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 3.98   | 67.14  | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.00   | 67.22  | 16.21 |      | 150.0 |         |
|           |                                                                | Z | 4.11   | 66.83  | 16.08 |      | 150.0 |         |
| 10449-AAA | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.26   | 67.02  | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.28   | 67.08  | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 4.38   | 66.77  | 16.19 |      | 150.0 |         |
| 10450-AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.47   | 66.91  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.48   | 66.96  | 16.37 |      | 150.0 |         |
|           |                                                                | Z | 4.58   | 66.71  | 16.22 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.25   | 67.38  | 14.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.28   | 67.53  | 15.01 |      | 150.0 |         |
|           |                                                                | Z | 3.46   | 67.22  | 15.21 |      | 150.0 |         |
| 10456-AAA | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.22   | 67.99  | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.22   | 68.02  | 16.86 |      | 150.0 |         |
|           |                                                                | Z | 6.28   | 67.84  | 16.71 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.78   | 65.43  | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.79   | 65.48  | 16.08 |      | 150.0 |         |
|           |                                                                | Z | 3.83   | 65.16  | 15.92 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.02   | 66.44  | 14.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.06   | 66.64  | 14.18 |      | 150.0 |         |
|           |                                                                | Z | 3.28   | 66.54  | 14.63 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.18   | 65.23  | 15.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.18   | 65.21  | 15.41 |      | 150.0 |         |
|           |                                                                | Z | 4.47   | 65.25  | 15.75 |      | 150.0 |         |

|           |                                                                   |   |       |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.93  | 68.87  | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 1.00  | 70.16  | 17.38 |      | 150.0 |         |
|           |                                                                   | Z | 0.88  | 67.06  | 15.60 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.32  | 84.19  | 21.37 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 46.98 | 120.39 | 31.74 |      | 80.0  |         |
|           |                                                                   | Z | 70.92 | 123.84 | 32.55 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.93  | 61.17  | 8.92  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.50  | 66.22  | 11.48 |      | 80.0  |         |
|           |                                                                   | Z | 4.18  | 75.74  | 15.77 |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.83  | 60.00  | 7.74  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.90  | 60.95  | 8.47  |      | 80.0  |         |
|           |                                                                   | Z | 1.89  | 66.55  | 11.77 |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.27  | 79.79  | 19.27 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 44.63 | 117.13 | 30.10 |      | 80.0  |         |
|           |                                                                   | Z | 63.16 | 119.86 | 30.88 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.88  | 60.65  | 8.58  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.28  | 64.64  | 10.73 |      | 80.0  |         |
|           |                                                                   | Z | 2.98  | 72.01  | 14.38 |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.83  | 60.00  | 7.69  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.85  | 60.44  | 8.16  |      | 80.0  |         |
|           |                                                                   | Z | 1.66  | 65.17  | 11.12 |      | 80.0  |         |
| 10467-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.54  | 80.96  | 19.70 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 60.93 | 121.68 | 31.18 |      | 80.0  |         |
|           |                                                                   | Z | 84.88 | 124.19 | 31.89 |      | 80.0  |         |
| 10468-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.89  | 60.80  | 8.68  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.33  | 65.06  | 10.94 |      | 80.0  |         |
|           |                                                                   | Z | 3.21  | 72.86  | 14.71 |      | 80.0  |         |
| 10469-AAB | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.83  | 60.00  | 7.69  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.85  | 60.46  | 8.17  |      | 80.0  |         |
|           |                                                                   | Z | 1.66  | 65.20  | 11.14 |      | 80.0  |         |
| 10470-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.54  | 80.99  | 19.71 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 63.11 | 122.20 | 31.29 |      | 80.0  |         |
|           |                                                                   | Z | 86.48 | 124.48 | 31.95 |      | 80.0  |         |
| 10471-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.88  | 60.76  | 8.65  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.32  | 64.98  | 10.89 |      | 80.0  |         |
|           |                                                                   | Z | 3.18  | 72.76  | 14.66 |      | 80.0  |         |
| 10472-AAB | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.83  | 60.00  | 7.68  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.84  | 60.42  | 8.13  |      | 80.0  |         |
|           |                                                                   | Z | 1.65  | 65.15  | 11.10 |      | 80.0  |         |
| 10473-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.52  | 80.93  | 19.68 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 62.71 | 122.07 | 31.26 |      | 80.0  |         |
|           |                                                                   | Z | 85.93 | 124.36 | 31.91 |      | 80.0  |         |
| 10474-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.88  | 60.74  | 8.64  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.31  | 64.94  | 10.87 |      | 80.0  |         |
|           |                                                                   | Z | 3.15  | 72.67  | 14.63 |      | 80.0  |         |
| 10475-AAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.83  | 60.00  | 7.68  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.84  | 60.40  | 8.12  |      | 80.0  |         |
|           |                                                                   | Z | 1.64  | 65.11  | 11.08 |      | 80.0  |         |

|           |                                                                     |   |      |       |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10477-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.87 | 60.61 | 8.55  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.27 | 64.59 | 10.69 |      | 80.0 |         |
|           |                                                                     | Z | 2.97 | 71.99 | 14.36 |      | 80.0 |         |
| 10478-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.83 | 60.00 | 7.67  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.84 | 60.37 | 8.09  |      | 80.0 |         |
|           |                                                                     | Z | 1.63 | 65.04 | 11.04 |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.53 | 79.52 | 20.39 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 7.80 | 88.47 | 23.78 |      | 80.0 |         |
|           |                                                                     | Z | 5.78 | 82.49 | 22.28 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.53 | 72.09 | 15.68 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.36 | 79.96 | 18.76 |      | 80.0 |         |
|           |                                                                     | Z | 6.52 | 79.72 | 19.55 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.81 | 68.83 | 13.98 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.53 | 74.98 | 16.60 |      | 80.0 |         |
|           |                                                                     | Z | 5.48 | 76.73 | 18.13 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.20 | 68.90 | 15.09 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.93 | 73.22 | 17.16 |      | 80.0 |         |
|           |                                                                     | Z | 2.97 | 72.34 | 17.43 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.35 | 65.97 | 12.90 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.02 | 69.40 | 14.64 |      | 80.0 |         |
|           |                                                                     | Z | 4.23 | 73.30 | 17.24 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.28 | 65.32 | 12.60 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.83 | 68.32 | 14.18 |      | 80.0 |         |
|           |                                                                     | Z | 3.99 | 72.23 | 16.81 |      | 80.0 |         |
| 10485-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.68 | 71.36 | 17.35 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.27 | 74.89 | 19.08 |      | 80.0 |         |
|           |                                                                     | Z | 3.17 | 72.95 | 18.56 |      | 80.0 |         |
| 10486-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.64 | 67.61 | 15.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.99 | 69.69 | 16.14 |      | 80.0 |         |
|           |                                                                     | Z | 3.15 | 69.34 | 16.51 |      | 80.0 |         |
| 10487-AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.64 | 67.21 | 14.79 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.96 | 69.13 | 15.87 |      | 80.0 |         |
|           |                                                                     | Z | 3.15 | 68.96 | 16.33 |      | 80.0 |         |
| 10488-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.00 | 70.76 | 18.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.34 | 72.92 | 19.20 |      | 80.0 |         |
|           |                                                                     | Z | 3.42 | 71.88 | 18.69 |      | 80.0 |         |
| 10489-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.07 | 67.95 | 16.69 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.24 | 69.09 | 17.42 |      | 80.0 |         |
|           |                                                                     | Z | 3.37 | 68.53 | 17.27 |      | 80.0 |         |
| 10490-AAB | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.16 | 67.82 | 16.63 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.32 | 68.90 | 17.33 |      | 80.0 |         |
|           |                                                                     | Z | 3.47 | 68.38 | 17.21 |      | 80.0 |         |
| 10491-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.29 | 69.57 | 17.67 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.53 | 71.04 | 18.54 |      | 80.0 |         |
|           |                                                                     | Z | 3.67 | 70.46 | 18.17 |      | 80.0 |         |
| 10492-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.43 | 67.31 | 16.78 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.55 | 68.11 | 17.34 |      | 80.0 |         |
|           |                                                                     | Z | 3.72 | 67.80 | 17.20 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.50 | 67.21 | 16.74 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.62 | 67.97 | 17.27 |      | 80.0 |         |
|           |                                                                      | Z | 3.79 | 67.69 | 17.16 |      | 80.0 |         |
| 10494-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.52 | 70.87 | 18.10 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.84 | 72.64 | 19.08 |      | 80.0 |         |
|           |                                                                      | Z | 3.98 | 72.03 | 18.67 |      | 80.0 |         |
| 10495-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.45 | 67.59 | 16.97 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.58 | 68.42 | 17.54 |      | 80.0 |         |
|           |                                                                      | Z | 3.75 | 68.20 | 17.40 |      | 80.0 |         |
| 10496-AAB | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.54 | 67.39 | 16.91 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.65 | 68.15 | 17.44 |      | 80.0 |         |
|           |                                                                      | Z | 3.83 | 67.94 | 17.32 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.43 | 63.58 | 11.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.80 | 66.67 | 13.09 |      | 80.0 |         |
|           |                                                                      | Z | 2.27 | 68.74 | 14.99 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.24 | 60.00 | 8.33  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.23 | 60.00 | 8.51  |      | 80.0 |         |
|           |                                                                      | Z | 1.81 | 63.14 | 11.27 |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.26 | 60.00 | 8.18  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.24 | 60.00 | 8.34  |      | 80.0 |         |
|           |                                                                      | Z | 1.76 | 62.56 | 10.83 |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.78 | 70.93 | 17.56 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.23 | 73.75 | 19.01 |      | 80.0 |         |
|           |                                                                      | Z | 3.21 | 72.13 | 18.47 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.86 | 67.97 | 15.75 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.13 | 69.65 | 16.71 |      | 80.0 |         |
|           |                                                                      | Z | 3.25 | 69.01 | 16.80 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.90 | 67.83 | 15.61 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.18 | 69.45 | 16.55 |      | 80.0 |         |
|           |                                                                      | Z | 3.31 | 68.90 | 16.69 |      | 80.0 |         |
| 10503-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.96 | 70.56 | 17.92 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.29 | 72.71 | 19.10 |      | 80.0 |         |
|           |                                                                      | Z | 3.38 | 71.68 | 18.59 |      | 80.0 |         |
| 10504-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.05 | 67.84 | 16.62 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.22 | 69.00 | 17.36 |      | 80.0 |         |
|           |                                                                      | Z | 3.35 | 68.44 | 17.21 |      | 80.0 |         |
| 10505-AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.14 | 67.73 | 16.57 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.31 | 68.81 | 17.27 |      | 80.0 |         |
|           |                                                                      | Z | 3.45 | 68.28 | 17.16 |      | 80.0 |         |
| 10506-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.49 | 70.73 | 18.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.81 | 72.49 | 19.00 |      | 80.0 |         |
|           |                                                                      | Z | 3.95 | 71.88 | 18.59 |      | 80.0 |         |
| 10507-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.44 | 67.53 | 16.93 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.56 | 68.36 | 17.50 |      | 80.0 |         |
|           |                                                                      | Z | 3.73 | 68.13 | 17.36 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAB | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.53 | 67.32 | 16.87 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.64 | 68.08 | 17.40 |      | 80.0  |         |
|           |                                                                     | Z | 3.82 | 67.87 | 17.27 |      | 80.0  |         |
| 10509-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.90 | 69.82 | 17.65 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.14 | 71.06 | 18.38 |      | 80.0  |         |
|           |                                                                     | Z | 4.30 | 70.72 | 18.09 |      | 80.0  |         |
| 10510-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.92 | 67.34 | 16.97 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.03 | 67.99 | 17.44 |      | 80.0  |         |
|           |                                                                     | Z | 4.22 | 67.93 | 17.34 |      | 80.0  |         |
| 10511-AAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.99 | 67.15 | 16.93 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.09 | 67.75 | 17.36 |      | 80.0  |         |
|           |                                                                     | Z | 4.28 | 67.68 | 17.27 |      | 80.0  |         |
| 10512-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.00 | 71.09 | 18.05 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.33 | 72.71 | 18.93 |      | 80.0  |         |
|           |                                                                     | Z | 4.49 | 72.31 | 18.60 |      | 80.0  |         |
| 10513-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.80 | 67.50 | 17.05 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.92 | 68.21 | 17.54 |      | 80.0  |         |
|           |                                                                     | Z | 4.11 | 68.20 | 17.45 |      | 80.0  |         |
| 10514-AAB | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.85 | 67.16 | 16.95 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.95 | 67.80 | 17.41 |      | 80.0  |         |
|           |                                                                     | Z | 4.13 | 67.78 | 17.32 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.99 | 63.41 | 14.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.00 | 63.71 | 15.22 |      | 150.0 |         |
|           |                                                                     | Z | 0.98 | 62.80 | 14.50 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.63 | 71.18 | 17.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.75 | 74.25 | 19.60 |      | 150.0 |         |
|           |                                                                     | Z | 0.56 | 68.07 | 16.15 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.84 | 65.39 | 15.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.87 | 66.03 | 16.14 |      | 150.0 |         |
|           |                                                                     | Z | 0.82 | 64.43 | 14.97 |      | 150.0 |         |
| 10518-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.47 | 66.84 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.48 | 66.90 | 16.36 |      | 150.0 |         |
|           |                                                                     | Z | 4.58 | 66.60 | 16.20 |      | 150.0 |         |
| 10519-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.63 | 67.03 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.64 | 67.09 | 16.46 |      | 150.0 |         |
|           |                                                                     | Z | 4.77 | 66.85 | 16.33 |      | 150.0 |         |
| 10520-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.49 | 66.98 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.50 | 67.04 | 16.38 |      | 150.0 |         |
|           |                                                                     | Z | 4.62 | 66.81 | 16.25 |      | 150.0 |         |
| 10521-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.42 | 66.97 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.43 | 67.03 | 16.37 |      | 150.0 |         |
|           |                                                                     | Z | 4.55 | 66.80 | 16.23 |      | 150.0 |         |
| 10522-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.48 | 67.10 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.49 | 67.16 | 16.47 |      | 150.0 |         |
|           |                                                                     | Z | 4.61 | 66.88 | 16.31 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.38 | 67.02 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.40 | 67.08 | 16.35 |      | 150.0 |         |
|           |                                                            | Z | 4.49 | 66.74 | 16.15 |      | 150.0 |         |
| 10524-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.42 | 67.02 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.44 | 67.08 | 16.44 |      | 150.0 |         |
|           |                                                            | Z | 4.56 | 66.80 | 16.28 |      | 150.0 |         |
| 10525-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.44 | 66.11 | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.45 | 66.16 | 16.04 |      | 150.0 |         |
|           |                                                            | Z | 4.54 | 65.84 | 15.87 |      | 150.0 |         |
| 10526-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.58 | 66.42 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.59 | 66.48 | 16.17 |      | 150.0 |         |
|           |                                                            | Z | 4.71 | 66.22 | 16.01 |      | 150.0 |         |
| 10527-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.51 | 66.39 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.52 | 66.45 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 4.63 | 66.17 | 15.95 |      | 150.0 |         |
| 10528-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.52 | 66.40 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.54 | 66.46 | 16.15 |      | 150.0 |         |
|           |                                                            | Z | 4.65 | 66.19 | 15.99 |      | 150.0 |         |
| 10529-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.52 | 66.40 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.54 | 66.46 | 16.15 |      | 150.0 |         |
|           |                                                            | Z | 4.65 | 66.19 | 15.99 |      | 150.0 |         |
| 10531-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.50 | 66.46 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.51 | 66.53 | 16.14 |      | 150.0 |         |
|           |                                                            | Z | 4.64 | 66.30 | 16.00 |      | 150.0 |         |
| 10532-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.37 | 66.32 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.39 | 66.39 | 16.08 |      | 150.0 |         |
|           |                                                            | Z | 4.50 | 66.15 | 15.93 |      | 150.0 |         |
| 10533-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.53 | 66.48 | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.54 | 66.54 | 16.15 |      | 150.0 |         |
|           |                                                            | Z | 4.66 | 66.23 | 15.97 |      | 150.0 |         |
| 10534-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.07 | 66.45 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.09 | 66.50 | 16.19 |      | 150.0 |         |
|           |                                                            | Z | 5.19 | 66.33 | 16.06 |      | 150.0 |         |
| 10535-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.13 | 66.62 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.14 | 66.67 | 16.27 |      | 150.0 |         |
|           |                                                            | Z | 5.25 | 66.51 | 16.14 |      | 150.0 |         |
| 10536-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.01 | 66.59 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.03 | 66.64 | 16.24 |      | 150.0 |         |
|           |                                                            | Z | 5.12 | 66.45 | 16.09 |      | 150.0 |         |
| 10537-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.07 | 66.55 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.08 | 66.59 | 16.22 |      | 150.0 |         |
|           |                                                            | Z | 5.18 | 66.42 | 16.08 |      | 150.0 |         |
| 10538-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.14 | 66.54 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.15 | 66.59 | 16.25 |      | 150.0 |         |
|           |                                                            | Z | 5.27 | 66.46 | 16.14 |      | 150.0 |         |
| 10540-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.07 | 66.52 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.08 | 66.57 | 16.26 |      | 150.0 |         |
|           |                                                            | Z | 5.20 | 66.47 | 16.16 |      | 150.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)   | X | 5.05 | 66.41 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.06 | 66.46 | 16.20 |      | 150.0 |         |
|           |                                                     | Z | 5.17 | 66.33 | 16.08 |      | 150.0 |         |
| 10542-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)   | X | 5.21 | 66.51 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.22 | 66.55 | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 5.33 | 66.41 | 16.13 |      | 150.0 |         |
| 10543-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)   | X | 5.27 | 66.52 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.28 | 66.56 | 16.29 |      | 150.0 |         |
|           |                                                     | Z | 5.41 | 66.45 | 16.18 |      | 150.0 |         |
| 10544-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)   | X | 5.40 | 66.53 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.42 | 66.58 | 16.18 |      | 150.0 |         |
|           |                                                     | Z | 5.49 | 66.45 | 16.06 |      | 150.0 |         |
| 10545-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)   | X | 5.59 | 66.98 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.60 | 67.03 | 16.36 |      | 150.0 |         |
|           |                                                     | Z | 5.69 | 66.88 | 16.22 |      | 150.0 |         |
| 10546-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)   | X | 5.45 | 66.68 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.46 | 66.73 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.56 | 66.67 | 16.13 |      | 150.0 |         |
| 10547-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)   | X | 5.52 | 66.76 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.53 | 66.80 | 16.25 |      | 150.0 |         |
|           |                                                     | Z | 5.63 | 66.71 | 16.14 |      | 150.0 |         |
| 10548-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)   | X | 5.72 | 67.56 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.74 | 67.62 | 16.64 |      | 150.0 |         |
|           |                                                     | Z | 5.92 | 67.73 | 16.62 |      | 150.0 |         |
| 10550-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)   | X | 5.50 | 66.81 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.51 | 66.85 | 16.30 |      | 150.0 |         |
|           |                                                     | Z | 5.59 | 66.68 | 16.14 |      | 150.0 |         |
| 10551-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)   | X | 5.47 | 66.72 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.48 | 66.77 | 16.22 |      | 150.0 |         |
|           |                                                     | Z | 5.59 | 66.72 | 16.13 |      | 150.0 |         |
| 10552-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)   | X | 5.41 | 66.62 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.42 | 66.66 | 16.16 |      | 150.0 |         |
|           |                                                     | Z | 5.50 | 66.51 | 16.03 |      | 150.0 |         |
| 10553-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)   | X | 5.48 | 66.60 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.49 | 66.65 | 16.19 |      | 150.0 |         |
|           |                                                     | Z | 5.59 | 66.56 | 16.08 |      | 150.0 |         |
| 10554-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.82 | 66.88 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.83 | 66.92 | 16.26 |      | 150.0 |         |
|           |                                                     | Z | 5.90 | 66.82 | 16.15 |      | 150.0 |         |
| 10555-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.94 | 67.15 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.95 | 67.20 | 16.38 |      | 150.0 |         |
|           |                                                     | Z | 6.03 | 67.13 | 16.28 |      | 150.0 |         |
| 10556-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.96 | 67.23 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.98 | 67.27 | 16.41 |      | 150.0 |         |
|           |                                                     | Z | 6.05 | 67.17 | 16.30 |      | 150.0 |         |
| 10557-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.92 | 67.10 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 5.93 | 67.14 | 16.36 |      | 150.0 |         |
|           |                                                     | Z | 6.02 | 67.08 | 16.27 |      | 150.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 99pc duty cycle)             | X | 5.96 | 67.24 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.97 | 67.29 | 16.45 |      | 150.0 |         |
|           |                                                                 | Z | 6.07 | 67.25 | 16.37 |      | 150.0 |         |
| 10560-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 99pc duty cycle)             | X | 5.95 | 67.10 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.97 | 67.14 | 16.41 |      | 150.0 |         |
|           |                                                                 | Z | 6.06 | 67.09 | 16.33 |      | 150.0 |         |
| 10561-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 99pc duty cycle)             | X | 5.89 | 67.09 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.90 | 67.14 | 16.45 |      | 150.0 |         |
|           |                                                                 | Z | 5.99 | 67.06 | 16.35 |      | 150.0 |         |
| 10562-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 99pc duty cycle)             | X | 5.97 | 67.34 | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.98 | 67.39 | 16.57 |      | 150.0 |         |
|           |                                                                 | Z | 6.12 | 67.47 | 16.55 |      | 150.0 |         |
| 10563-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 99pc duty cycle)             | X | 6.05 | 67.24 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.06 | 67.29 | 16.49 |      | 150.0 |         |
|           |                                                                 | Z | 6.41 | 67.91 | 16.73 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.78 | 66.85 | 16.41 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.80 | 66.93 | 16.49 |      | 150.0 |         |
|           |                                                                 | Z | 4.91 | 66.67 | 16.35 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.99 | 67.29 | 16.74 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.01 | 67.35 | 16.80 |      | 150.0 |         |
|           |                                                                 | Z | 5.14 | 67.15 | 16.69 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.83 | 67.11 | 16.54 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.84 | 67.18 | 16.62 |      | 150.0 |         |
|           |                                                                 | Z | 4.98 | 66.99 | 16.50 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.87 | 67.55 | 16.94 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.87 | 67.57 | 16.98 |      | 150.0 |         |
|           |                                                                 | Z | 5.01 | 67.40 | 16.87 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.73 | 66.85 | 16.28 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.75 | 66.97 | 16.39 |      | 150.0 |         |
|           |                                                                 | Z | 4.88 | 66.73 | 16.25 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.84 | 67.72 | 17.05 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.73 | 17.08 |      | 150.0 |         |
|           |                                                                 | Z | 4.96 | 67.48 | 16.93 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.86 | 67.53 | 16.95 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.87 | 67.55 | 16.99 |      | 150.0 |         |
|           |                                                                 | Z | 5.00 | 67.32 | 16.86 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.13 | 63.98 | 15.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.15 | 64.46 | 15.85 |      | 130.0 |         |
|           |                                                                 | Z | 1.15 | 63.75 | 15.28 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.14 | 64.53 | 15.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.16 | 65.03 | 16.22 |      | 130.0 |         |
|           |                                                                 | Z | 1.16 | 64.27 | 15.61 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 1.37 | 80.51 | 21.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 2.18 | 89.24 | 25.44 |      | 130.0 |         |
|           |                                                                 | Z | 1.24 | 77.68 | 20.60 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.21 | 70.03 | 18.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.26 | 70.93 | 19.36 |      | 130.0 |         |
|           |                                                                 | Z | 1.21 | 69.23 | 18.24 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.55 | 66.59 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.57 | 66.69 | 16.52 |      | 130.0 |         |
|           |                                                                 | Z | 4.69 | 66.45 | 16.40 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.58 | 66.78 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.60 | 66.87 | 16.60 |      | 130.0 |         |
|           |                                                                 | Z | 4.71 | 66.62 | 16.47 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.76 | 67.04 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.78 | 67.12 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.92 | 66.93 | 16.65 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.67 | 67.21 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 67.27 | 16.85 |      | 130.0 |         |
|           |                                                                 | Z | 4.82 | 67.09 | 16.76 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.41 | 66.37 | 16.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.44 | 66.52 | 16.15 |      | 130.0 |         |
|           |                                                                 | Z | 4.58 | 66.34 | 16.04 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.45 | 66.43 | 16.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 66.59 | 16.18 |      | 130.0 |         |
|           |                                                                 | Z | 4.62 | 66.36 | 16.05 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.57 | 67.26 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.58 | 67.33 | 16.82 |      | 130.0 |         |
|           |                                                                 | Z | 4.71 | 67.12 | 16.69 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.34 | 66.11 | 15.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.38 | 66.30 | 15.94 |      | 130.0 |         |
|           |                                                                 | Z | 4.52 | 66.09 | 15.82 |      | 130.0 |         |
| 10583-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.55 | 66.59 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.57 | 66.69 | 16.52 |      | 130.0 |         |
|           |                                                                 | Z | 4.69 | 66.45 | 16.40 |      | 130.0 |         |
| 10584-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.58 | 66.78 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.60 | 66.87 | 16.60 |      | 130.0 |         |
|           |                                                                 | Z | 4.71 | 66.62 | 16.47 |      | 130.0 |         |
| 10585-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.76 | 67.04 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.78 | 67.12 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.92 | 66.93 | 16.65 |      | 130.0 |         |
| 10586-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.67 | 67.21 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 67.27 | 16.85 |      | 130.0 |         |
|           |                                                                 | Z | 4.82 | 67.09 | 16.76 |      | 130.0 |         |
| 10587-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.41 | 66.37 | 16.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.44 | 66.52 | 16.15 |      | 130.0 |         |
|           |                                                                 | Z | 4.58 | 66.34 | 16.04 |      | 130.0 |         |
| 10588-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.45 | 66.43 | 16.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 66.59 | 16.18 |      | 130.0 |         |
|           |                                                                 | Z | 4.62 | 66.36 | 16.05 |      | 130.0 |         |
| 10589-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.57 | 67.26 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.58 | 67.33 | 16.82 |      | 130.0 |         |
|           |                                                                 | Z | 4.71 | 67.12 | 16.69 |      | 130.0 |         |
| 10590-AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.34 | 66.11 | 15.76 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.38 | 66.30 | 15.94 |      | 130.0 |         |
|           |                                                                 | Z | 4.52 | 66.09 | 15.82 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.71 | 66.67 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.73 | 66.75 | 16.62 |      | 130.0 |         |
|           |                                                       | Z | 4.84 | 66.53 | 16.51 |      | 130.0 |         |
| 10592-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.84 | 66.99 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.86 | 67.07 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 5.00 | 66.87 | 16.64 |      | 130.0 |         |
| 10593-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.76 | 66.86 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.78 | 66.96 | 16.62 |      | 130.0 |         |
|           |                                                       | Z | 4.92 | 66.77 | 16.52 |      | 130.0 |         |
| 10594-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.82 | 67.05 | 16.69 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.84 | 67.13 | 16.78 |      | 130.0 |         |
|           |                                                       | Z | 4.97 | 66.94 | 16.68 |      | 130.0 |         |
| 10595-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.78 | 67.01 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.80 | 67.10 | 16.69 |      | 130.0 |         |
|           |                                                       | Z | 4.94 | 66.89 | 16.57 |      | 130.0 |         |
| 10596-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.71 | 66.98 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.73 | 67.08 | 16.69 |      | 130.0 |         |
|           |                                                       | Z | 4.87 | 66.88 | 16.57 |      | 130.0 |         |
| 10597-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.66 | 66.85 | 16.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.69 | 66.96 | 16.56 |      | 130.0 |         |
|           |                                                       | Z | 4.82 | 66.78 | 16.45 |      | 130.0 |         |
| 10598-AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.65 | 67.11 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.67 | 67.18 | 16.81 |      | 130.0 |         |
|           |                                                       | Z | 4.81 | 67.03 | 16.73 |      | 130.0 |         |
| 10599-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.39 | 67.16 | 16.75 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.40 | 67.23 | 16.84 |      | 130.0 |         |
|           |                                                       | Z | 5.52 | 67.11 | 16.73 |      | 130.0 |         |
| 10600-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.51 | 67.57 | 16.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.53 | 67.67 | 17.03 |      | 130.0 |         |
|           |                                                       | Z | 5.67 | 67.58 | 16.94 |      | 130.0 |         |
| 10601-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.40 | 67.32 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.42 | 67.41 | 16.92 |      | 130.0 |         |
|           |                                                       | Z | 5.55 | 67.30 | 16.82 |      | 130.0 |         |
| 10602-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.53 | 67.48 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.55 | 67.58 | 16.92 |      | 130.0 |         |
|           |                                                       | Z | 5.64 | 67.31 | 16.73 |      | 130.0 |         |
| 10603-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.60 | 67.77 | 17.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.62 | 67.84 | 17.19 |      | 130.0 |         |
|           |                                                       | Z | 5.72 | 67.63 | 17.03 |      | 130.0 |         |
| 10604-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.48 | 67.44 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.50 | 67.51 | 17.01 |      | 130.0 |         |
|           |                                                       | Z | 5.52 | 67.07 | 16.74 |      | 130.0 |         |
| 10605-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.51 | 67.48 | 16.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.53 | 67.59 | 17.04 |      | 130.0 |         |
|           |                                                       | Z | 5.64 | 67.42 | 16.91 |      | 130.0 |         |
| 10606-AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.24 | 66.77 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.27 | 66.88 | 16.54 |      | 130.0 |         |
|           |                                                       | Z | 5.39 | 66.79 | 16.45 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.56 | 66.02 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.58 | 66.11 | 16.27 |      | 130.0 |         |
|           |                                                   | Z | 4.68 | 65.84 | 16.13 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.71 | 66.38 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 66.48 | 16.43 |      | 130.0 |         |
|           |                                                   | Z | 4.87 | 66.25 | 16.30 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.60 | 66.21 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.63 | 66.32 | 16.26 |      | 130.0 |         |
|           |                                                   | Z | 4.75 | 66.09 | 16.13 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.66 | 66.38 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.68 | 66.48 | 16.42 |      | 130.0 |         |
|           |                                                   | Z | 4.81 | 66.25 | 16.30 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.57 | 66.17 | 16.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.59 | 66.28 | 16.27 |      | 130.0 |         |
|           |                                                   | Z | 4.72 | 66.06 | 16.14 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.57 | 66.31 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.59 | 66.44 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.73 | 66.20 | 16.18 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.56 | 66.14 | 16.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.59 | 66.27 | 16.18 |      | 130.0 |         |
|           |                                                   | Z | 4.73 | 66.09 | 16.06 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.53 | 66.39 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.55 | 66.47 | 16.42 |      | 130.0 |         |
|           |                                                   | Z | 4.68 | 66.29 | 16.31 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.56 | 65.98 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.59 | 66.13 | 16.05 |      | 130.0 |         |
|           |                                                   | Z | 4.72 | 65.87 | 15.91 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.20 | 66.41 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.22 | 66.48 | 16.45 |      | 130.0 |         |
|           |                                                   | Z | 5.34 | 66.37 | 16.34 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.27 | 66.60 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.29 | 66.69 | 16.53 |      | 130.0 |         |
|           |                                                   | Z | 5.41 | 66.54 | 16.40 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.17 | 66.64 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.19 | 66.72 | 16.55 |      | 130.0 |         |
|           |                                                   | Z | 5.29 | 66.54 | 16.42 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.17 | 66.40 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.19 | 66.49 | 16.38 |      | 130.0 |         |
|           |                                                   | Z | 5.31 | 66.37 | 16.27 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.25 | 66.42 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.27 | 66.52 | 16.44 |      | 130.0 |         |
|           |                                                   | Z | 5.40 | 66.41 | 16.34 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.27 | 66.59 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.28 | 66.65 | 16.62 |      | 130.0 |         |
|           |                                                   | Z | 5.40 | 66.53 | 16.52 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.27 | 66.70 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.28 | 66.78 | 16.68 |      | 130.0 |         |
|           |                                                   | Z | 5.41 | 66.70 | 16.60 |      | 130.0 |         |

|           |                                                     |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)   | X | 5.14 | 66.21 | 16.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.16 | 66.31 | 16.32 |      | 130.0 |         |
|           |                                                     | Z | 5.28 | 66.20 | 16.22 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)   | X | 5.34 | 66.45 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.36 | 66.54 | 16.49 |      | 130.0 |         |
|           |                                                     | Z | 5.48 | 66.42 | 16.39 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)   | X | 5.55 | 66.97 | 16.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.57 | 67.07 | 16.81 |      | 130.0 |         |
|           |                                                     | Z | 5.88 | 67.48 | 16.97 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)   | X | 5.53 | 66.46 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.54 | 66.54 | 16.40 |      | 130.0 |         |
|           |                                                     | Z | 5.63 | 66.43 | 16.30 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)   | X | 5.77 | 67.07 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.79 | 67.16 | 16.68 |      | 130.0 |         |
|           |                                                     | Z | 5.88 | 67.02 | 16.56 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)   | X | 5.53 | 66.46 | 16.22 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.55 | 66.56 | 16.32 |      | 130.0 |         |
|           |                                                     | Z | 5.67 | 66.54 | 16.25 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)   | X | 5.62 | 66.57 | 16.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.64 | 66.67 | 16.37 |      | 130.0 |         |
|           |                                                     | Z | 5.76 | 66.64 | 16.29 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)   | X | 5.96 | 67.80 | 16.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.98 | 67.92 | 17.00 |      | 130.0 |         |
|           |                                                     | Z | 6.25 | 68.26 | 17.09 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)   | X | 5.89 | 67.74 | 17.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.91 | 67.78 | 17.11 |      | 130.0 |         |
|           |                                                     | Z | 6.11 | 67.97 | 17.16 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)   | X | 5.75 | 67.20 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.76 | 67.24 | 16.86 |      | 130.0 |         |
|           |                                                     | Z | 5.85 | 67.08 | 16.73 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)   | X | 5.60 | 66.69 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.62 | 66.77 | 16.45 |      | 130.0 |         |
|           |                                                     | Z | 5.73 | 66.69 | 16.36 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)   | X | 5.58 | 66.71 | 16.44 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.60 | 66.78 | 16.51 |      | 130.0 |         |
|           |                                                     | Z | 5.72 | 66.73 | 16.44 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)   | X | 5.44 | 65.95 | 15.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.47 | 66.09 | 15.91 |      | 130.0 |         |
|           |                                                     | Z | 5.60 | 66.05 | 15.82 |      | 130.0 |         |
| 10636-AAA | IEEE 1602.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.96 | 66.83 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 5.97 | 66.90 | 16.49 |      | 130.0 |         |
|           |                                                     | Z | 6.05 | 66.82 | 16.40 |      | 130.0 |         |
| 10637-AAA | IEEE 1602.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.10 | 67.19 | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.12 | 67.27 | 16.66 |      | 130.0 |         |
|           |                                                     | Z | 6.21 | 67.21 | 16.58 |      | 130.0 |         |
| 10638-AAA | IEEE 1602.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.10 | 67.17 | 16.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                     | Y | 6.12 | 67.25 | 16.63 |      | 130.0 |         |
|           |                                                     | Z | 6.21 | 67.17 | 16.54 |      | 130.0 |         |

|           |                                                        |   |       |        |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10639-AAA | IEEE 1602.11ac WiFi (160MHz, MCS3, 90pc duty cycle)    | X | 6.07  | 67.09  | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.09  | 67.17  | 16.63 |      | 130.0 |         |
|           |                                                        | Z | 6.19  | 67.14  | 16.56 |      | 130.0 |         |
| 10640-AAA | IEEE 1602.11ac WiFi (160MHz, MCS4, 90pc duty cycle)    | X | 6.06  | 67.06  | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.08  | 67.16  | 16.57 |      | 130.0 |         |
|           |                                                        | Z | 6.19  | 67.15  | 16.51 |      | 130.0 |         |
| 10641-AAA | IEEE 1602.11ac WiFi (160MHz, MCS5, 90pc duty cycle)    | X | 6.13  | 67.06  | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.15  | 67.15  | 16.59 |      | 130.0 |         |
|           |                                                        | Z | 6.23  | 67.02  | 16.46 |      | 130.0 |         |
| 10642-AAA | IEEE 1602.11ac WiFi (160MHz, MCS6, 90pc duty cycle)    | X | 6.16  | 67.29  | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.17  | 67.34  | 16.84 |      | 130.0 |         |
|           |                                                        | Z | 6.28  | 67.31  | 16.78 |      | 130.0 |         |
| 10643-AAA | IEEE 1602.11ac WiFi (160MHz, MCS7, 90pc duty cycle)    | X | 6.00  | 66.97  | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.02  | 67.06  | 16.61 |      | 130.0 |         |
|           |                                                        | Z | 6.11  | 66.97  | 16.50 |      | 130.0 |         |
| 10644-AAA | IEEE 1602.11ac WiFi (160MHz, MCS8, 90pc duty cycle)    | X | 6.09  | 67.26  | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.12  | 67.36  | 16.77 |      | 130.0 |         |
|           |                                                        | Z | 6.29  | 67.52  | 16.80 |      | 130.0 |         |
| 10645-AAA | IEEE 1602.11ac WiFi (160MHz, MCS9, 90pc duty cycle)    | X | 6.23  | 67.33  | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.26  | 67.42  | 16.77 |      | 130.0 |         |
|           |                                                        | Z | 6.72  | 68.38  | 17.18 |      | 130.0 |         |
| 10646-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 7.97  | 91.85  | 31.39 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 11.74 | 104.28 | 36.86 |      | 60.0  |         |
|           |                                                        | Z | 11.88 | 99.49  | 34.28 |      | 60.0  |         |
| 10647-AAB | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 7.13  | 89.84  | 30.79 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 9.93  | 100.75 | 35.82 |      | 60.0  |         |
|           |                                                        | Z | 10.62 | 97.47  | 33.72 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.64  | 63.39  | 10.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.67  | 63.88  | 10.62 |      | 150.0 |         |
|           |                                                        | Z | 0.72  | 63.48  | 11.02 |      | 150.0 |         |

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

## APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

- 1) The network analyzer and probe system was configured and calibrated.
- 2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
- 3) The complex admittance with respect to the probe aperture was measured
- 4) The complex relative permittivity  $\epsilon'$  can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\epsilon_r\epsilon_0}{[\ln(b/a)]^2} \int_a^b \int_a^b \int_0^\pi \cos\phi' \frac{\exp[-j\omega r(\mu_0\epsilon_r'\epsilon_0)^{1/2}]}{r} d\phi' d\rho' d\rho$$

where  $Y$  is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively,  $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$ ,  $\omega$  is the angular frequency, and  $j = \sqrt{-1}$ .

**Table D-I**  
**Composition of the Tissue Equivalent Matter**

| Frequency (MHz)           | 750          | 750        | 835   | 835   | 1750 | 1750 | 1900  | 1900  | 2450-2600  | 2450-2600 | 5200-5800  | 5200-5800 |
|---------------------------|--------------|------------|-------|-------|------|------|-------|-------|------------|-----------|------------|-----------|
| Tissue                    | Head         | Body       | Head  | Body  | Head | Body | Head  | Body  | Head       | Body      | Head       | Body      |
| Ingredients (% by weight) |              |            |       |       |      |      |       |       |            |           |            |           |
| Bactericide               | See page 2-3 | See page 2 | 0.1   | 0.1   |      |      |       |       | See page 4 |           | See page 5 |           |
| DGBE                      |              |            |       |       | 47   | 31   | 44.92 | 29.44 |            | 26.7      |            |           |
| HEC                       |              |            | 1     | 1     |      |      |       |       |            |           |            |           |
| NaCl                      |              |            | 1.45  | 0.94  | 0.4  | 0.2  | 0.18  | 0.39  |            | 0.1       |            |           |
| Sucrose                   |              |            | 57    | 44.9  |      |      |       |       |            |           |            |           |
| Polysorbate (Tween) 80    |              |            |       |       |      |      |       |       |            |           |            | 20        |
| Water                     |              |            | 40.45 | 53.06 | 52.6 | 68.8 | 54.9  | 70.17 |            | 73.2      |            | 80        |

FCC ID: A3LSMG965F



SAR EVALUATION REPORT



Approved by:  
Quality Manager

Test Dates:  
10/16/17 - 12/06/17

DUT Type:  
Portable Handset

APPENDIX D:  
Page 1 of 5

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

|                                                                  |                                                                                                                                                     |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| H <sub>2</sub> O                                                 | Water, 35 – 58%                                                                                                                                     |
| Sucrose                                                          | Sugar, white, refined, 40 – 60%                                                                                                                     |
| NaCl                                                             | Sodium Chloride, 0 – 6%                                                                                                                             |
| Hydroxyethyl-cellulose                                           | Medium Viscosity (CAS# 9004-62-0), <0.3%                                                                                                            |
| Preventol-D7                                                     | Preservative: aqueous preparation, (CAS# 55965-84-9), containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone, 0.1 – 0.7% |
| Relevant for safety; Refer to the respective Safety Data Sheet*. |                                                                                                                                                     |

**Figure D-1**

### Composition of 750 MHz Head and Body Tissue Equivalent Matter

**Note:** 750MHz liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

#### Measurement Certificate / Material Test

|              |                                          |
|--------------|------------------------------------------|
| Item Name    | Body Tissue Simulating Liquid (MSL750V2) |
| Product No.  | SL AAM 075 AA (Batch: 150518-2)          |
| Manufacturer | SPEAG                                    |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

Validation results were within  $\pm 2.5\%$  towards the target values of Methanol.

#### Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

#### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 20-Apr-16                                                   |
| Operator        | WM                                                          |

#### Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 1.212 g/cm <sup>3</sup> |
| TSL Heat-capacity | 3.006 kJ/(kg*K)         |

| f [MHz] | Measured |       |       | Target |       |       | Diff. to Target [%] |  |
|---------|----------|-------|-------|--------|-------|-------|---------------------|--|
|         | e'       | e''   | sigma | eps    | sigma | Δ-eps | Δ-sigma             |  |
| 600     | 57.2     | 24.76 | 0.83  | 56.1   | 0.95  | 2.0   | -13.2               |  |
| 625     | 57.0     | 24.43 | 0.85  | 56.0   | 0.95  | 1.7   | -11.0               |  |
| 650     | 56.7     | 24.11 | 0.87  | 55.9   | 0.96  | 1.4   | -8.8                |  |
| 675     | 56.4     | 23.82 | 0.89  | 55.8   | 0.96  | 1.1   | -6.6                |  |
| 700     | 56.1     | 23.53 | 0.92  | 55.7   | 0.96  | 0.7   | -4.5                |  |
| 725     | 55.9     | 23.32 | 0.94  | 55.6   | 0.96  | 0.5   | -2.2                |  |
| 750     | 55.7     | 23.12 | 0.96  | 55.5   | 0.96  | 0.2   | 0.1                 |  |
| 775     | 55.4     | 22.93 | 0.99  | 55.4   | 0.97  | -0.1  | 2.4                 |  |
| 800     | 55.1     | 22.73 | 1.01  | 55.3   | 0.97  | -0.4  | 4.6                 |  |
| 825     | 54.9     | 22.59 | 1.04  | 55.2   | 0.98  | -0.7  | 6.0                 |  |
| 838     | 54.8     | 22.52 | 1.05  | 55.2   | 0.98  | -0.8  | 6.7                 |  |
| 850     | 54.6     | 22.45 | 1.06  | 55.2   | 0.99  | -0.9  | 7.4                 |  |
| 875     | 54.4     | 22.32 | 1.09  | 55.1   | 1.02  | -1.2  | 6.6                 |  |
| 900     | 54.1     | 22.19 | 1.11  | 55.0   | 1.05  | -1.6  | 5.8                 |  |
| 925     | 53.9     | 22.09 | 1.14  | 55.0   | 1.06  | -1.9  | 6.9                 |  |
| 950     | 53.7     | 21.98 | 1.16  | 54.9   | 1.08  | -2.2  | 8.0                 |  |
| 975     | 53.5     | 21.91 | 1.19  | 54.9   | 1.09  | -2.6  | 9.3                 |  |
| 1000    | 53.2     | 21.83 | 1.21  | 54.8   | 1.10  | -2.9  | 10.6                |  |

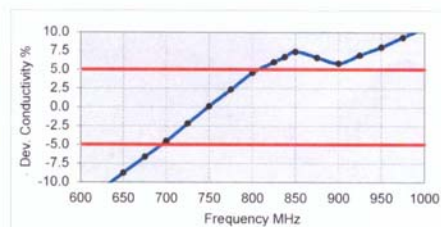
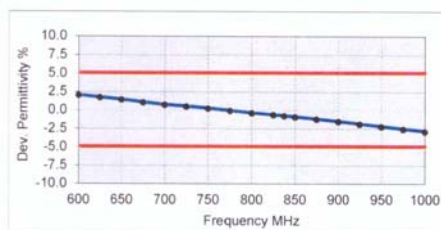


**Figure D-2**  
**750MHz Body Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMG965F                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>10/16/17 - 12/06/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 2 of 5      |

## Measurement Certificate / Material Test

|              |                                          |
|--------------|------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HSL750V2) |
| Product No.  | SL AAH 075 AB (Batch: 160322-2)          |
| Manufacturer | SPEAG                                    |

### Measurement Method

|                                                                |
|----------------------------------------------------------------|
| TSL dielectric parameters measured using calibrated DAK probe. |
|----------------------------------------------------------------|

### Setup Validation

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Validation results were within $\pm 2.5\%$ towards the target values of Methanol. |
|-----------------------------------------------------------------------------------|

### Target Parameters

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards. |
|-----------------------------------------------------------------------------------|

### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 23-Mar-16                                                   |
| Operator        | WM                                                          |

### Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 1.284 g/cm <sup>3</sup> |
| TSL Heat-capacity | 2.701 kJ/(kg*K)         |

| f [MHz] | Measured |       |       | Target |       | Diff.to Target [%] |                 |
|---------|----------|-------|-------|--------|-------|--------------------|-----------------|
|         | e'       | e''   | sigma | eps    | sigma | $\Delta$ -eps      | $\Delta$ -sigma |
| 600     | 44.9     | 22.60 | 0.75  | 42.7   | 0.88  | 5.1                | -14.4           |
| 625     | 44.5     | 22.37 | 0.78  | 42.6   | 0.88  | 4.5                | -12.0           |
| 650     | 44.2     | 22.13 | 0.80  | 42.5   | 0.89  | 4.0                | -9.6            |
| 675     | 43.8     | 21.90 | 0.82  | 42.3   | 0.89  | 3.4                | -7.4            |
| 700     | 43.4     | 21.67 | 0.84  | 42.2   | 0.89  | 2.8                | -5.1            |
| 725     | 43.1     | 21.52 | 0.87  | 42.1   | 0.89  | 2.4                | -2.6            |
| 750     | 42.8     | 21.37 | 0.89  | 41.9   | 0.89  | 2.0                | -0.2            |
| 775     | 42.4     | 21.21 | 0.91  | 41.8   | 0.90  | 1.5                | 2.1             |
| 800     | 42.1     | 21.04 | 0.94  | 41.7   | 0.90  | 0.9                | 4.4             |
| 825     | 41.8     | 20.92 | 0.96  | 41.6   | 0.91  | 0.5                | 5.9             |
| 838     | 41.6     | 20.86 | 0.97  | 41.5   | 0.91  | 0.2                | 6.6             |
| 850     | 41.5     | 20.79 | 0.98  | 41.5   | 0.92  | 0.0                | 7.3             |
| 875     | 41.2     | 20.68 | 1.01  | 41.5   | 0.94  | -0.7               | 6.7             |
| 900     | 40.9     | 20.56 | 1.03  | 41.5   | 0.97  | -1.5               | 6.1             |
| 925     | 40.6     | 20.48 | 1.05  | 41.5   | 0.98  | -2.0               | 7.3             |
| 950     | 40.3     | 20.39 | 1.08  | 41.4   | 0.99  | -2.6               | 8.3             |
| 975     | 40.1     | 20.29 | 1.10  | 41.4   | 1.00  | -3.2               | 9.5             |
| 1000    | 39.8     | 20.20 | 1.12  | 41.3   | 1.01  | -3.7               | 10.7            |

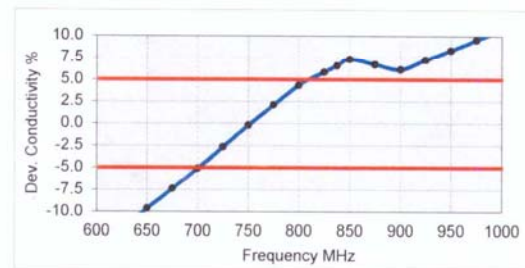
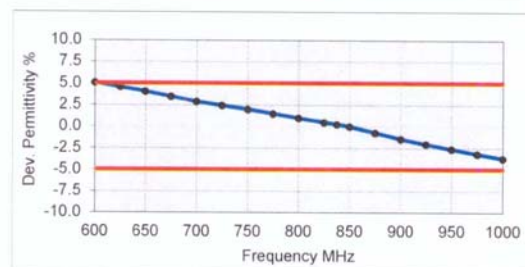


**Figure D-3**  
**750MHz Head Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMG965F                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>10/16/17 - 12/06/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 3 of 5      |

### 3 Composition / Information on ingredients

The Item is composed of the following ingredients:

|                      |              |                                     |
|----------------------|--------------|-------------------------------------|
| Water                | 50 – 73 %    |                                     |
| Non-ionic detergents | 25 – 50 %    | polyoxyethylenesorbitan monolaurate |
| NaCl                 | 0 – 2 %      |                                     |
| Preservative         | 0.05 – 0.1 % | Preventol-D7                        |

Safety relevant ingredients:

|                    |         |                                                                                                        |
|--------------------|---------|--------------------------------------------------------------------------------------------------------|
| CAS-No. 55965-84-9 | < 0.1 % | aqueous preparation, containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone |
|--------------------|---------|--------------------------------------------------------------------------------------------------------|

|                   |       |                                     |
|-------------------|-------|-------------------------------------|
| CAS-No. 9005-64-5 | <50 % | polyoxyethylenesorbitan monolaurate |
|-------------------|-------|-------------------------------------|

According to international guidelines, the product is not a dangerous mixture and therefore not required to be marked by symbols.

**Figure D-4**  
**Composition of 2.4-2.6 GHz Head Tissue Equivalent Matter**

**Note:** 2.4 – 2.6 GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

#### Measurement Certificate / Material Test

|              |                                                 |
|--------------|-------------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HBBL1900-3800V3) |
| Product No.  | SL AAH 196 AB (Batch: 160330-1)                 |
| Manufacturer | SPEAG                                           |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

Validation results were within  $\pm 2.5\%$  towards the target values of Methanol.

#### Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

#### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 30-Mar-16                                                   |
| Operator        | WM                                                          |

#### Additional Information

TSL Density 1.054 g/cm<sup>3</sup>

TSL Heat-capacity 3.389 kJ/(kg·K)

| f [MHz] | Measured    |              |          | Target      |              |          | Diff to Target [%] |                    |                |
|---------|-------------|--------------|----------|-------------|--------------|----------|--------------------|--------------------|----------------|
|         | $\epsilon'$ | $\epsilon''$ | $\sigma$ | $\epsilon'$ | $\epsilon''$ | $\sigma$ | $\Delta\epsilon'$  | $\Delta\epsilon''$ | $\Delta\sigma$ |
| 1900    | 40.7        | 12.3         | 1.3      | 40.0        | 1.4          | 1.7      | -6.9               |                    |                |
| 1950    | 40.5        | 12.5         | 1.4      | 40.0        | 1.4          | 1.2      | -3.3               |                    |                |
| 2000    | 40.3        | 12.6         | 1.4      | 40.0        | 1.4          | 0.8      | 0.1                |                    |                |
| 2050    | 40.1        | 12.7         | 1.5      | 39.9        | 1.4          | 0.6      | 0.5                |                    |                |
| 2100    | 39.9        | 12.9         | 1.5      | 39.8        | 1.5          | 0.3      | 0.9                |                    |                |
| 2150    | 39.8        | 13.0         | 1.6      | 39.7        | 1.5          | 0.1      | 1.2                |                    |                |
| 2200    | 39.6        | 13.1         | 1.6      | 39.6        | 1.6          | -0.2     | 1.7                |                    |                |
| 2250    | 39.4        | 13.2         | 1.7      | 39.6        | 1.6          | -0.3     | 2.0                |                    |                |
| 2300    | 39.2        | 13.3         | 1.7      | 39.5        | 1.7          | -0.6     | 2.4                |                    |                |
| 2350    | 39.1        | 13.5         | 1.8      | 39.4        | 1.7          | -0.8     | 2.9                |                    |                |
| 2400    | 38.9        | 13.6         | 1.8      | 39.3        | 1.8          | -1.0     | 3.4                |                    |                |
| 2450    | 38.7        | 13.7         | 1.9      | 39.2        | 1.8          | -1.2     | 4.0                |                    |                |
| 2500    | 38.5        | 13.8         | 1.9      | 39.1        | 1.9          | -1.5     | 3.9                |                    |                |
| 2550    | 38.3        | 13.9         | 2.0      | 39.1        | 1.9          | -1.9     | 3.5                |                    |                |
| 2600    | 38.2        | 14.1         | 2.0      | 39.0        | 2.0          | -2.2     | 3.8                |                    |                |
| 2650    | 37.9        | 14.2         | 2.1      | 38.9        | 2.0          | -2.6     | 3.8                |                    |                |
| 2700    | 37.8        | 14.3         | 2.2      | 38.9        | 2.1          | -2.8     | 3.9                |                    |                |
| 2750    | 37.5        | 14.4         | 2.2      | 38.8        | 2.1          | -3.3     | 3.6                |                    |                |
| 2800    | 37.4        | 14.5         | 2.3      | 38.8        | 2.2          | -3.6     | 3.6                |                    |                |
| 2850    | 37.2        | 14.6         | 2.3      | 38.7        | 2.2          | -3.9     | 3.7                |                    |                |
| 2900    | 37.0        | 14.7         | 2.4      | 38.6        | 2.3          | -4.1     | 3.8                |                    |                |
| 2950    | 36.8        | 14.8         | 2.4      | 38.6        | 2.3          | -4.5     | 3.7                |                    |                |
| 3000    | 36.6        | 14.9         | 2.5      | 38.5        | 2.4          | -4.8     | 3.6                |                    |                |
| 3050    | 36.4        | 15.0         | 2.5      | 38.4        | 2.5          | -5.2     | 3.8                |                    |                |
| 3100    | 36.2        | 15.1         | 2.6      | 38.4        | 2.5          | -5.6     | 3.8                |                    |                |
| 3150    | 36.1        | 15.2         | 2.7      | 38.3        | 2.6          | -5.9     | 4.0                |                    |                |
| 3200    | 35.9        | 15.2         | 2.7      | 38.3        | 2.6          | -6.2     | 3.9                |                    |                |
| 3250    | 35.7        | 15.3         | 2.8      | 38.2        | 2.7          | -6.6     | 4.1                |                    |                |
| 3300    | 35.5        | 15.3         | 2.8      | 38.2        | 2.7          | -6.9     | 4.0                |                    |                |
| 3350    | 35.4        | 15.4         | 2.9      | 38.1        | 2.8          | -7.2     | 4.2                |                    |                |
| 3400    | 35.2        | 15.5         | 2.9      | 38.0        | 2.8          | -7.5     | 4.1                |                    |                |
| 3450    | 35.0        | 15.5         | 3.0      | 38.0        | 2.9          | -7.8     | 4.2                |                    |                |
| 3500    | 34.9        | 15.6         | 3.0      | 37.9        | 2.9          | -8.1     | 4.2                |                    |                |
| 3550    | 34.7        | 15.6         | 3.1      | 37.9        | 3.0          | -8.4     | 4.2                |                    |                |
| 3600    | 34.5        | 15.7         | 3.1      | 37.8        | 3.0          | -8.7     | 4.4                |                    |                |
| 3650    | 34.4        | 15.8         | 3.2      | 37.8        | 3.1          | -9.0     | 4.3                |                    |                |
| 3700    | 34.2        | 15.8         | 3.3      | 37.7        | 3.1          | -9.3     | 4.5                |                    |                |
| 3750    | 34.1        | 15.9         | 3.3      | 37.6        | 3.2          | -9.5     | 4.4                |                    |                |
| 3800    | 33.9        | 15.9         | 3.4      | 37.6        | 3.2          | -9.9     | 4.7                |                    |                |
| 3850    | 33.7        | 16.0         | 3.4      | 37.5        | 3.3          | -10.1    | 4.7                |                    |                |

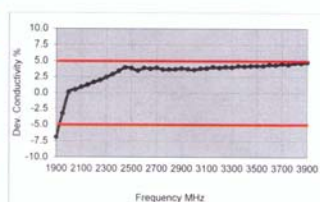
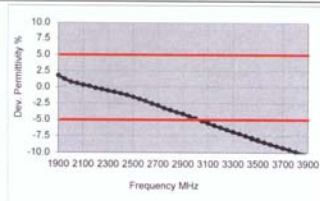


**Figure D-5**  
**2.4-2.6 GHz Head Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMG965F                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>10/16/17 - 12/06/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 4 of 5      |

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

|             |          |
|-------------|----------|
| Water       | 50 – 65% |
| Mineral oil | 10 – 30% |
| Emulsifiers | 8 – 25%  |
| Sodium salt | 0 – 1.5% |

Figure D-6

### Composition of 5 GHz Head Tissue Equivalent Matter

**Note:** 5GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

#### Measurement Certificate / Material Test

|                                                                                   |                                                             |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------|
| Item Name                                                                         | Head Tissue Simulating Liquid (HBBL3500-5800V5)             |
| Product No.                                                                       | SL AAH 502 AG (Batch: 160331-2)                             |
| Manufacturer                                                                      | SPEAG                                                       |
| <b>Measurement Method</b>                                                         |                                                             |
| TSL dielectric parameters measured using calibrated DAK probe.                    |                                                             |
| <b>Setup Validation</b>                                                           |                                                             |
| Validation results were within $\pm 2.5\%$ towards the target values of Methanol. |                                                             |
| <b>Target Parameters</b>                                                          |                                                             |
| Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards. |                                                             |
| <b>Test Condition</b>                                                             |                                                             |
| Ambient                                                                           | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature                                                                   | 22°C                                                        |
| Test Date                                                                         | 4-Apr-16                                                    |
| Operator                                                                          | WM                                                          |
| <b>Additional Information</b>                                                     |                                                             |
| TSL Density                                                                       | 0.985 g/cm <sup>3</sup>                                     |
| TSL Heat-capacity                                                                 | 3.383 kJ/(kg·K)                                             |

|         | Measured |       |       | Target |       | Diff.to Target [%] |         |  |
|---------|----------|-------|-------|--------|-------|--------------------|---------|--|
| f [MHz] | e'       | e''   | sigma | eps    | sigma | Δ-eps              | Δ-sigma |  |
| 3400    | 39.0     | 15.12 | 2.86  | 38.0   | 2.81  | 2.5                | 1.8     |  |
| 3500    | 38.8     | 15.09 | 2.94  | 37.9   | 2.91  | 2.3                | 0.9     |  |
| 3600    | 38.7     | 15.08 | 3.02  | 37.8   | 3.02  | 2.3                | 0.2     |  |
| 3700    | 38.6     | 15.08 | 3.10  | 37.7   | 3.12  | 2.4                | -0.6    |  |
| 3800    | 38.4     | 15.07 | 3.19  | 37.6   | 3.22  | 2.2                | -0.9    |  |
| 3900    | 38.3     | 15.09 | 3.27  | 37.5   | 3.32  | 2.2                | -1.6    |  |
| 4000    | 38.2     | 15.10 | 3.36  | 37.4   | 3.43  | 2.3                | -1.9    |  |
| 4100    | 38.1     | 15.13 | 3.45  | 37.2   | 3.53  | 2.3                | -2.2    |  |
| 4200    | 38.0     | 15.18 | 3.55  | 37.1   | 3.63  | 2.3                | -2.2    |  |
| 4300    | 37.8     | 15.22 | 3.64  | 37.0   | 3.73  | 2.1                | -2.5    |  |
| 4400    | 37.7     | 15.29 | 3.74  | 36.9   | 3.84  | 2.2                | -2.5    |  |
| 4500    | 37.6     | 15.34 | 3.84  | 36.8   | 3.94  | 2.2                | -2.5    |  |
| 4600    | 37.4     | 15.41 | 3.94  | 36.7   | 4.04  | 2.0                | -2.5    |  |
| 4700    | 37.3     | 15.47 | 4.05  | 36.6   | 4.14  | 2.0                | -2.2    |  |
| 4800    | 37.1     | 15.53 | 4.15  | 36.4   | 4.25  | 1.8                | -2.2    |  |
| 4850    | 37.1     | 15.57 | 4.20  | 36.4   | 4.30  | 2.0                | -2.2    |  |
| 4900    | 37.0     | 15.60 | 4.25  | 36.3   | 4.35  | 1.8                | -2.2    |  |
| 4950    | 36.9     | 15.62 | 4.30  | 36.3   | 4.40  | 1.7                | -2.2    |  |
| 5000    | 36.8     | 15.66 | 4.35  | 36.2   | 4.45  | 1.6                | -2.2    |  |
| 5050    | 36.8     | 15.68 | 4.40  | 36.2   | 4.50  | 1.8                | -2.2    |  |
| 5100    | 36.7     | 15.73 | 4.46  | 36.1   | 4.55  | 1.7                | -2.0    |  |
| 5150    | 36.6     | 15.75 | 4.51  | 36.0   | 4.60  | 1.5                | -2.0    |  |
| 5200    | 36.5     | 15.78 | 4.57  | 36.0   | 4.66  | 1.4                | -1.8    |  |
| 5250    | 36.4     | 15.80 | 4.62  | 35.9   | 4.71  | 1.3                | -1.8    |  |
| 5300    | 36.4     | 15.84 | 4.67  | 35.9   | 4.76  | 1.5                | -1.8    |  |
| 5350    | 36.3     | 15.85 | 4.72  | 35.8   | 4.81  | 1.4                | -1.8    |  |
| 5400    | 36.2     | 15.88 | 4.77  | 35.8   | 4.86  | 1.2                | -1.9    |  |
| 5450    | 36.2     | 15.90 | 4.82  | 35.7   | 4.91  | 1.4                | -1.9    |  |
| 5500    | 36.1     | 15.91 | 4.87  | 35.6   | 4.96  | 1.3                | -1.9    |  |
| 5550    | 36.0     | 15.95 | 4.93  | 35.6   | 5.01  | 1.2                | -1.7    |  |
| 5600    | 35.9     | 15.99 | 4.98  | 35.5   | 5.07  | 1.0                | -1.7    |  |
| 5650    | 35.9     | 16.02 | 5.04  | 35.5   | 5.12  | 1.2                | -1.5    |  |
| 5700    | 35.8     | 16.05 | 5.09  | 35.4   | 5.17  | 1.1                | -1.5    |  |
| 5750    | 35.7     | 16.09 | 5.15  | 35.4   | 5.22  | 1.0                | -1.3    |  |
| 5800    | 35.7     | 16.10 | 5.20  | 35.3   | 5.27  | 1.1                | -1.3    |  |
| 5850    | 35.6     | 16.14 | 5.25  | 35.3   | 5.34  | 0.8                | -1.6    |  |
| 5900    | 35.5     | 16.15 | 5.30  | 35.3   | 5.40  | 0.6                | -1.9    |  |

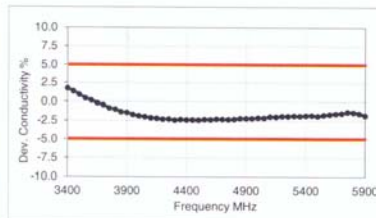
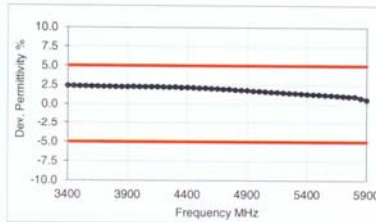


Figure D-7

### 5GHz Head Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMG965F                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>10/16/17 - 12/06/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 5 of 5      |

## APPENDIX E: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

**Table E-1**  
**SAR System Validation Summary – 1g**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT | COND. | PERM.             | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|-------|-------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  | (σ)   | (ε <sub>r</sub> ) | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| G            | 750         | 8/30/2017  | 3332     | ES3DV3     | 750              | Head  | 0.911             | 43.081        | PASS            | PASS           | PASS            | N/A         | N/A  |
| K            | 835         | 5/2/2017   | 7406     | EX3DV4     | 835              | Head  | 0.896             | 40.478        | PASS            | PASS           | PASS            | GMSK        | PASS |
| J            | 1750        | 6/23/2017  | 3209     | ES3DV3     | 1750             | Head  | 1.333             | 39.844        | PASS            | PASS           | PASS            | N/A         | N/A  |
| I            | 1900        | 5/3/2017   | 3213     | ES3DV3     | 1900             | Head  | 1.440             | 39.799        | PASS            | PASS           | PASS            | GMSK        | PASS |
| G            | 2450        | 10/16/2017 | 3332     | ES3DV3     | 2450             | Head  | 1.880             | 38.615        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| G            | 2600        | 10/16/2017 | 3332     | ES3DV3     | 2600             | Head  | 2.051             | 38.039        | PASS            | PASS           | PASS            | TDD         | PASS |
| H            | 5250        | 6/10/2017  | 3914     | EX3DV4     | 5250             | Head  | 4.580             | 35.029        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H            | 5600        | 6/10/2017  | 3914     | EX3DV4     | 5600             | Head  | 4.940             | 34.501        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H            | 5750        | 6/10/2017  | 3914     | EX3DV4     | 5750             | Head  | 5.103             | 34.300        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| I            | 750         | 3/7/2017   | 3213     | ES3DV3     | 750              | Body  | 0.955             | 56.554        | PASS            | PASS           | PASS            | N/A         | N/A  |
| I            | 835         | 4/24/2017  | 3213     | ES3DV3     | 835              | Body  | 0.991             | 53.903        | PASS            | PASS           | PASS            | GMSK        | PASS |
| K            | 1750        | 5/1/2017   | 7406     | EX3DV4     | 1750             | Body  | 1.514             | 51.685        | PASS            | PASS           | PASS            | N/A         | N/A  |
| J            | 1900        | 6/15/2017  | 3209     | ES3DV3     | 1900             | Body  | 1.552             | 52.203        | PASS            | PASS           | PASS            | GMSK        | PASS |
| E            | 2450        | 4/3/2017   | 3319     | ES3DV3     | 2450             | Body  | 1.979             | 51.563        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| E            | 2600        | 4/3/2017   | 3319     | ES3DV3     | 2600             | Body  | 2.182             | 50.898        | PASS            | PASS           | PASS            | TDD         | PASS |
| D            | 5250        | 10/24/2017 | 7308     | EX3DV4     | 5250             | Body  | 5.405             | 48.529        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5600        | 10/24/2017 | 7308     | EX3DV4     | 5600             | Body  | 5.910             | 47.818        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5750        | 10/24/2017 | 7308     | EX3DV4     | 5750             | Body  | 6.135             | 47.546        | PASS            | PASS           | PASS            | OFDM        | N/A  |

**Table E-2**  
**SAR System Validation Summary – 10g**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT | COND. | PERM.             | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|-------|-------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  | (σ)   | (ε <sub>r</sub> ) | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| K            | 1750        | 5/1/2017   | 7406     | EX3DV4     | 1750             | Body  | 1.514             | 51.685        | PASS            | PASS           | PASS            | N/A         | N/A  |
| H            | 1900        | 9/5/2017   | 7410     | EX3DV4     | 1900             | Body  | 1.580             | 52.546        | PASS            | PASS           | PASS            | GMSK        | PASS |
| E            | 2450        | 4/3/2017   | 3319     | ES3DV3     | 2450             | Body  | 1.979             | 51.563        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| E            | 2600        | 4/3/2017   | 3319     | ES3DV3     | 2600             | Body  | 2.182             | 50.898        | PASS            | PASS           | PASS            | TDD         | PASS |
| D            | 5250        | 10/24/2017 | 7308     | EX3DV4     | 5250             | Body  | 5.405             | 48.529        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5600        | 10/24/2017 | 7308     | EX3DV4     | 5600             | Body  | 5.910             | 47.818        | PASS            | PASS           | PASS            | OFDM        | N/A  |

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMG965F                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>10/16/17 - 12/06/17 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX E:<br>Page 1 of 1      |

## APPENDIX E: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

**Table E-1**  
**SAR System Validation Summary – 1g**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT | COND. | PERM.             | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|-------|-------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  | (σ)   | (ε <sub>r</sub> ) | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| G            | 750         | 8/30/2017  | 3332     | ES3DV3     | 750              | Head  | 0.911             | 43.081        | PASS            | PASS           | PASS            | N/A         | N/A  |
| K            | 835         | 5/2/2017   | 7406     | EX3DV4     | 835              | Head  | 0.896             | 40.478        | PASS            | PASS           | PASS            | GMSK        | PASS |
| J            | 1750        | 6/23/2017  | 3209     | ES3DV3     | 1750             | Head  | 1.333             | 39.844        | PASS            | PASS           | PASS            | N/A         | N/A  |
| I            | 1900        | 5/3/2017   | 3213     | ES3DV3     | 1900             | Head  | 1.440             | 39.799        | PASS            | PASS           | PASS            | GMSK        | PASS |
| G            | 2450        | 10/16/2017 | 3332     | ES3DV3     | 2450             | Head  | 1.880             | 38.615        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| G            | 2600        | 10/16/2017 | 3332     | ES3DV3     | 2600             | Head  | 2.051             | 38.039        | PASS            | PASS           | PASS            | TDD         | PASS |
| H            | 5250        | 6/10/2017  | 3914     | EX3DV4     | 5250             | Head  | 4.580             | 35.029        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H            | 5600        | 6/10/2017  | 3914     | EX3DV4     | 5600             | Head  | 4.940             | 34.501        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H            | 5750        | 6/10/2017  | 3914     | EX3DV4     | 5750             | Head  | 5.103             | 34.300        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| I            | 750         | 3/7/2017   | 3213     | ES3DV3     | 750              | Body  | 0.955             | 56.554        | PASS            | PASS           | PASS            | N/A         | N/A  |
| I            | 835         | 4/24/2017  | 3213     | ES3DV3     | 835              | Body  | 0.991             | 53.903        | PASS            | PASS           | PASS            | GMSK        | PASS |
| K            | 1750        | 5/1/2017   | 7406     | EX3DV4     | 1750             | Body  | 1.514             | 51.685        | PASS            | PASS           | PASS            | N/A         | N/A  |
| J            | 1900        | 6/15/2017  | 3209     | ES3DV3     | 1900             | Body  | 1.552             | 52.203        | PASS            | PASS           | PASS            | GMSK        | PASS |
| E            | 2450        | 4/3/2017   | 3319     | ES3DV3     | 2450             | Body  | 1.979             | 51.563        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| E            | 2600        | 4/3/2017   | 3319     | ES3DV3     | 2600             | Body  | 2.182             | 50.898        | PASS            | PASS           | PASS            | TDD         | PASS |
| D            | 5250        | 10/24/2017 | 7308     | EX3DV4     | 5250             | Body  | 5.405             | 48.529        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5600        | 10/24/2017 | 7308     | EX3DV4     | 5600             | Body  | 5.910             | 47.818        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5750        | 10/24/2017 | 7308     | EX3DV4     | 5750             | Body  | 6.135             | 47.546        | PASS            | PASS           | PASS            | OFDM        | N/A  |

**Table E-2**  
**SAR System Validation Summary – 10g**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT | COND. | PERM.             | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|-------|-------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  | (σ)   | (ε <sub>r</sub> ) | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| K            | 1750        | 5/1/2017   | 7406     | EX3DV4     | 1750             | Body  | 1.514             | 51.685        | PASS            | PASS           | PASS            | N/A         | N/A  |
| H            | 1900        | 9/5/2017   | 7410     | EX3DV4     | 1900             | Body  | 1.580             | 52.546        | PASS            | PASS           | PASS            | GMSK        | PASS |
| E            | 2450        | 4/3/2017   | 3319     | ES3DV3     | 2450             | Body  | 1.979             | 51.563        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| E            | 2600        | 4/3/2017   | 3319     | ES3DV3     | 2600             | Body  | 2.182             | 50.898        | PASS            | PASS           | PASS            | TDD         | PASS |
| D            | 5250        | 10/24/2017 | 7308     | EX3DV4     | 5250             | Body  | 5.405             | 48.529        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| D            | 5600        | 10/24/2017 | 7308     | EX3DV4     | 5600             | Body  | 5.910             | 47.818        | PASS            | PASS           | PASS            | OFDM        | N/A  |

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
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## APPENDIX G: POWER REDUCTION VERIFICATION

Per the May 2017 TCBC Workshop Notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process was divided into two parts: (1) evaluation of output power levels for individual or multiple triggering mechanisms and (2) evaluation of the triggering distances for proximity-based sensors.

### 1.1 Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

### 1.2 Distance Verification Procedure

The distance verification procedure was performed according to the following procedure:

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom.
2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced, per KDB Publication 616217 D04v01r02 and FCC Guidance. Each applicable test position was evaluated. The distances were confirmed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.
3. Steps 1 and 2 were repeated for low, mid, and high bands, as appropriate (see note below Table G-2 for more details).
4. Steps 1 through 3 were repeated for all distance-based power reduction mechanisms.

|                                    |                                                                                                                                   |                       |                                                                                       |                                 |
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### 1.3 Main Antenna Verification Summary

**Table G-1**  
**Power Measurement Verification for Main Antenna**

| Mechanism(s)          | Mode/Band   | Conducted Power (dBm) |                        |                        |
|-----------------------|-------------|-----------------------|------------------------|------------------------|
|                       |             | Un-triggered (Max)    | Mechanism #1 (Reduced) | Mechanism #2 (Reduced) |
| Hotspot On            | UMTS B4     | 22.64                 | 19.58                  |                        |
| Hotspot On            | UMTS B2     | 22.71                 | 19.68                  |                        |
| Hotspot On            | LTE FDD B4  | 23.36                 | 20.50                  |                        |
| Hotspot On            | LTE FDD B66 | 22.76                 | 19.78                  |                        |
| Hotspot On            | LTE FDD B2  | 22.67                 | 19.70                  |                        |
| Hotspot On            | LTE FDD B25 | 22.67                 | 19.68                  |                        |
| Hotspot On            | LTE FDD B7  | 23.47                 | 20.47                  |                        |
| Hotspot On            | LTE TDD B41 | 23.22                 | 20.36                  |                        |
| Hotspot On            | LTE TDD B38 | 23.45                 | 20.50                  |                        |
| Grip                  | UMTS B4     | 22.62                 | 19.61                  |                        |
| Grip                  | UMTS B2     | 22.67                 | 19.63                  |                        |
| Grip                  | LTE FDD B4  | 23.32                 | 20.47                  |                        |
| Grip                  | LTE FDD B66 | 22.68                 | 19.78                  |                        |
| Grip                  | LTE FDD B7  | 23.50                 | 20.50                  |                        |
| Hotspot On, then Grip | UMTS B4     | 22.56                 | 19.54                  | 19.55                  |
| Hotspot On, then Grip | UMTS B2     | 22.77                 | 19.79                  | 19.77                  |
| Hotspot On, then Grip | LTE FDD B4  | 23.32                 | 20.46                  | 20.45                  |
| Hotspot On, then Grip | LTE FDD B66 | 22.68                 | 19.77                  | 19.77                  |
| Hotspot On, then Grip | LTE FDD B7  | 23.49                 | 20.50                  | 20.50                  |
| Grip, then Hotspot On | UMTS B4     | 22.55                 | 19.55                  | 19.54                  |
| Grip, then Hotspot On | UMTS B2     | 22.83                 | 19.81                  | 19.78                  |
| Grip, then Hotspot On | LTE FDD B4  | 23.37                 | 20.48                  | 20.46                  |
| Grip, then Hotspot On | LTE FDD B66 | 22.71                 | 19.69                  | 19.68                  |
| Grip, then Hotspot On | LTE FDD B7  | 23.47                 | 20.48                  | 20.50                  |

|                                           |                                                                                                                                   |                              |                                                                                       |                                        |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
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**Table G-2**  
**Distance Measurement Verification for Main Antenna**

| Mechanism(s) | Test Condition     | Band | Distance Measurements (mm) |             | Minimum Distance from Manufacturer (mm) |
|--------------|--------------------|------|----------------------------|-------------|-----------------------------------------|
|              |                    |      | Moving Toward              | Moving Away |                                         |
| Grip         | Body - Back Side   | Mid  | 10                         | 12          | 9                                       |
| Grip         | Body - Back Side   | High | 10                         | 12          | 9                                       |
| Grip         | Body - Front Side  | Mid  | 8                          | 10          | 8                                       |
| Grip         | Body - Front Side  | High | 8                          | 10          | 8                                       |
| Grip         | Body - Bottom Edge | Mid  | 12                         | 13          | 12                                      |
| Grip         | Body - Bottom Edge | High | 12                         | 13          | 12                                      |

\*Note: Mid band refers to: LTE B4/66 & UMTS B2/4; High band refers to: LTE B7

## 1.4 WIFI Verification Summary

**Table G-3**  
**Power Measurement Verification WIFI**

| Mechanism(s) | Mode/Band                | Conducted Power (dBm) |                        |
|--------------|--------------------------|-----------------------|------------------------|
|              |                          | Un-triggered (Max)    | Mechanism #1 (Reduced) |
| Held-to-Ear  | 802.11b                  | 18.26                 | 16.32                  |
| Held-to-Ear  | 802.11g                  | 16.70                 | 15.92                  |
| Held-to-Ear  | 802.11n (2.4GHz)         | 15.61                 | 14.94                  |
| Held-to-Ear  | 802.11a                  | 17.50                 | 14.20                  |
| Held-to-Ear  | 802.11n (5GHz, 20MHz BW) | 17.91                 | 14.30                  |
| Held-to-Ear  | 802.11 ac (20MHz BW)     | 17.11                 | 14.12                  |
| Held-to-Ear  | 802.11n (5GHz, 40MHz BW) | 16.45                 | 14.49                  |
| Held-to-Ear  | 802.11 ac (40MHz BW)     | 16.40                 | 14.36                  |

\*Note: 802.11ac (80 MHz BW) was not evaluated due to equipment limitations

**Table G-4**  
**Distance Measurement Verification for WIFI**

| Mechanism(s) | Test Condition     | Mode/Band | Distance Measurements (mm) |             | Minimum Distance from Manufacturer (mm) |
|--------------|--------------------|-----------|----------------------------|-------------|-----------------------------------------|
|              |                    |           | Moving Toward              | Moving Away |                                         |
| Held-to-Ear  | Head - Right Cheek | 2.4 GHz   | 69                         | >94         | 60                                      |
| Held-to-Ear  | Head - Right Cheek | 5 GHz     | 69                         | >94         | 60                                      |
| Held-to-Ear  | Head - Left Cheek  | 2.4 GHz   | 65                         | 94          | 60                                      |
| Held-to-Ear  | Head - Left Cheek  | 5 GHz     | 69                         | >94         | 60                                      |

|                                           |                                                                                                                                   |                              |                                                                                       |                                        |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
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## APPENDIX H: CONDUCTED POWERS FOR 4X4 DL MIMO

This device supports downlink 4x4 MIMO operations for LTE Bands 4 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per May 2017 TCB Workshop Notes, SAR for downlink 4x4 MIMO was not needed since the maximum average output power in 4x4 downlink MIMO mode was not > 0.25 dB higher than the maximum output power with downlink 4x4 MIMO inactive. When carrier aggregation is applicable, power measurements were performed with the downlink carrier aggregation and 4x4 DL MIMO active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

### H.1 Single Carrier 4x4 Downlink MIMO

**Table H-1  
Additional Maximum Output Powers**

| LTE Band | Bandwidth [MHz] | Channel | Frequency [MHz] | Modulation | RB Size | RB Offset | 4x4 DL MIMO Tx. Power [dBm] | Single Antenna Tx. Power [dBm] | Target Power [dBm] |
|----------|-----------------|---------|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|--------------------|
| 4        | 20              | 20050   | 1720            | QPSK       | 1       | 50        | 22.72                       | 22.84                          | 23.0               |

**Table H-2  
Additional Reduced Output Powers**

| LTE Band | Bandwidth [MHz] | Channel | Frequency [MHz] | Modulation | RB Size | RB Offset | 4x4 DL MIMO Tx. Power [dBm] | Single Antenna Tx. Power [dBm] | Target Power [dBm] |
|----------|-----------------|---------|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|--------------------|
| 4        | 15              | 20025   | 1717.5          | 64QAM      | 1       | 74        | 20.24                       | 20.50                          | 20.0               |

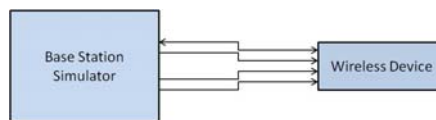


**Figure H-1  
Power Measurement Setup**

|                                           |                                                                                                                                   |                              |                                                                                       |                                        |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
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